Inventory & Monitoring Program
Pacific Island Network
Monitoring Plan

Appendix C: Existing Monitoring

Prepared by Gordon Dicus

30 September 2004

Pacific Island Network (PACN)

Territory of Guam
War in the Pacific National Historical Park (WAPA)

Commonwealth of the Northern Mariana Islands
American Memorial Park, Saipan (AMME)

Territory of American Samoa
National Park of American Samoa (NPSA)

State of Hawaii
USS Arizona Memorial, Oahu (USAR)
Kalaupapa National Historical Park, Molokai (KALA)
Haleakala National Park, Maui (HALE)
Ala Kahakai National Historic Trail, Hawaii (ALKA)
Puukohola Heiau National Historic Site, Hawaii (PUHE)
Kaloko-Honokohau National Historical Park, Hawaii (KAHO)
Puuhonua O Honaunau National Historical Park, Hawaii (PUHO)
Hawaii Volcanoes National Park, Hawaii (HAVO)

Existing Monitoring Projects within the Pacific Island Network

PARK : **ALKA**

Topic Water Quality Project Title

First Year: 1973 End Year: 1998 Status Complete Proj Duration

Data Type/Location Kona Hilton, Banyans, four sites at Kailua Bay Pier, Honokohau Harbor inside KAHO. Puako Beach Lots, Hapuna Beach, Kawaihae Harbor and Pier, Mauna Kea Beach Hotel, Kauhako Bay/Hookena, Honaunau Bay inside PUHO, Kealakekua Bay, Kaimu Beach, HK Brown Park

Comments:

Data Collected Salinity, total coliform, fecal coliform, enterococci, fecal streptococci, and C. porfringens, temperature, total nitrogen, TKN, nitrate/nitrite, total phosphorous, and turbidity, dissolved oxygen, transparency, pH, total non-filterable residue, ammonia, phosphate, total organic carbon, silica, and chlorophyll a, salinity, and phosphate.

Proj Purpose monitoring sewage pollution at recreational beach areas.

Proj Usefulness

Oranizations associated with this Project:	Theme Keywords associated with Project
State of Hawai`i Department of Health	cultural

Contact Persons associated with this Project:

Eugene Akazawa	State of Hawai`i Department of Health

Publications associated with this Project:

PARK : **ALKA**

Topic Fauna Project Title Biological Inventory of Anchialine Pools in National Parks of Hawaii

First Year: End Year: Status Planned Proj Duration

Data Type/Location Candidate anchialine pools, fish ponds, and other brackish water habitat occur in ALKA, HAVO, KAHO, KALA, and PUHO.

Comments:

Data Collected A time-activity budget will be compiled for Megalagrion xanthomelas (MEGXAN). Other odonates will also be counted. A second observer will make a 3-minute visual count of fish, followed by targeted netting of distinct morphotypes. Potential species of concern (SOC) invertebrates will be collected. All CLMH surveyed will be measured for temperature, dissolved oxygen, specific conductance/salinity, and pH.

Proj Purpose 1. Create park-specific anchialine pool databases that tabulate and cross-reference GPS data, anchialine pool descriptions, and historical faunal surveys for all coastal lentic mixohaline habitat (CLMH).
2. Classify anchialine pools by associated vegetation, substrate, water chemistry, and physical size characteristics.
3. Inventory all known CLMH for MEGXAN and alien fauna.
4. Inventory stratified subsamples of CLMH for other potential arthropod SOCs
5. Compare historical data for alien fish and odonates with current surveys to detect range expansions of these species.
6. Estimate relative species abundance for a subset of pools with good historical records

Proj Usefulness

Oranizations associated with this Project:	Theme Keywords associated with Project
National Parks Service Inventory and Monitoring	fish
US Geological Survey	invertebrates

Contact Persons associated with this Project:

David Foote	US Geological Survey

Publications associated with this Project:

PARK : **ALKA**

Topic Water Quality Project Title Comprehensive Environmental Monitoring Program (CEMP)

First Year: 1982 End Year: Status In work Proj Duration on-going

Data Type/Location Aquaculture facility bringing up both surface and abyssal seawater for farmers growing a variety of organisms from microalgae to fish and shellfish. Used water is discharged into "injection wells" which are typically exposed trenches

Comments:

Data Collected From 1982 to 1992; weekly sampling of incoming seawater (surface and deep), monthly sampling of groundwater wells, anchialine pools, outfalls, coastal and offshore sites (surface and bottom) for temperature, pH, salinity, DO, fecal coliform, enterococci, nutrients, total organic carbon, chlorophyll a, and turbidity. After 1992, anchialine pools, outfalls, coastal and offshore sites were reduced to quarterly collection and the offshore sites were changed to transects with 5 surface and 5 bottom collection locations and added benthic and fish surveys.

Proj Purpose Fulfill NPDES and county permit requirements of monitoring groundwater, nearshore marine areas, and aquaculture outfalls.

Proj Usefulness Baseline data available before development

Oranizations associated with this Project:

Natural Energy Laboratory of Hawai`i Authority

Theme Keywords associated with Project

benthic
coral reef
fish
invertebrates
nearshore
offshore

Contact Persons associated with this Project:

Jan War	Operations Manager	Natural Energy Laboratory of Hawai`i Authority

Publications associated with this Project:

PARK : **ALKA**

Topic Landscape Project Title Pelekane Bay Coordinated Resource Management Plan

First Year: End Year: Status In work Proj Duration

Data Type/Location experimental paddock rotation in ranch areas, sediment traps and rain gauges in streams and gulches, automated flowmeter and turbidimeter in lower reach of streams

Comments:

Data Collected erosion rates, vegetation growth, and precipitation in watershed, flow rate and turbidity in Makeahua Stream and eventually Makahuna gulch

Proj Purpose reduction and mitigation of erosion from watershed into Pelekane Bay

Proj Usefulness

Oranizations associated with this Project:

Mauna Kea Soil and Water Conservation District
US Department of Agriculture National Resources Conservation Service

Theme Keywords associated with Project

coral reef
vascular plants
watersheds

Contact Persons associated with this Project:

Carolyn Stewart	Mauna Kea Soil and Water Conservation District

Publications associated with this Project:

PARK : **ALKA**

Topic Water Quality Project Title Saltwater pool bacterial monitoring

First Year: End Year: Status In work Proj Duration on-going

Data Type/Location

Comments:

Data Collected

Proj Purpose monitor bacterial indicators in recreational salt water pool at resort facility

Proj Usefulness

Oranizations associated with this Project:	Theme Keywords associated with Project
AECOS Environmental Laboratory	cultural
Hualali Resort at Kaupulehu	

Contact Persons associated with this Project:

David Chai	Water Resources Manager	Hualali Resort at Kaupulehu
Karen Klein	Owner operator	AECOS Environmental Laboratory

Publications associated with this Project:

PARK : **ALKA**

Topic Water Quality Project Title Saltwater pool bacterial monitoring

First Year: End Year: Status In work Proj Duration on-going

Data Type/Location

Comments:

Data Collected

Proj Purpose monitor bacterial indicators in recreational salt water pool at resort facility

Proj Usefulness

Oranizations associated with this Project:	Theme Keywords associated with Project
AECOS Environmental Laboratory	cultural
Royal Sea Cliff Condominums	

Contact Persons associated with this Project:

Karen Klein	Owner operator	AECOS Environmental Laboratory

Publications associated with this Project:

PARK : **AMME**

Topic Marine

Project Title (informal) Regular survey of water quality at mouth of drainage of constructed wetland within the park

First Year:

End Year:

Status In work

Proj Duration

Data Type/Location Constructed wetland in AMME

Comments: From phone conversation with Pat Young, EPA, San Francisco, on 12/16/03 (Grant Kaye has notes from conversation), see also record #15

Data Collected Ongoing

Proj Purpose The CNMI-DEQ built a wetlands pond to collect storm water runoff from a nearby hotel, and channel the water into the AMME's lagoon. They enlarged the holding pond, and planted mangroves, as well as doing some landscaping. Unfortunately, the water from the reverse osmosis plant (?) is too salty, and the response of the planted vegetation has been limited. The only fish species that thrived in the constructed wetlands was Tilapia. Flushing of water from the lagoon into the pond is not frequent enough or of sufficient regularity to make this a successful project overall. Samples are taken at the mouth of the constructed ditch regularly (?) by DEQ staff.

Proj Usefulness Provides information about runoff into AMME lagoon

Oranizations associated with this Project:

Commonwealth of Northern Marianas Islands - Department of Environmental Quality

Theme Keywords associated with Project

nearshore

oceanic

watersheds

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **AMME**

Topic

Project Title Biological monitoring of Puerto Rico mudflat near Puerto Rico dump

First Year:

End Year:

Status Planned

Proj Duration

Data Type/Location Mudflats adjacent to the dump

Comments: Even though this record is "planned," information from Kimber DeVerse and Gary Denton seem to indicate it is completed. The PI contact should be Gary Denton, who sent material to Kimber de Verse (Biota_TechReport.pdf and Sed-tech_report.pdf).

Data Collected Biological monitoring data

Proj Purpose Biological monitoring of mudflats adjacent to the dump.

Proj Usefulness ?

Oranizations associated with this Project:

Commonwealth of Northern Marianas Islands - Department of Environmental Quality

Theme Keywords associated with Project

biological

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **AMME**

Topic Marine Project Title CNMI Department of Water Quality Measurements 1996 and 1997

First Year: 1996 End Year: 1997 Status Complete Proj Duration

Data Type/Location AMME artificial wetland

Comments: same as conversation notes from Pat Young? This record is from Email from Kathy Yuknavage to Kimber DeVerse (See record #9)

Data Collected water quality measurements, 1996 and 1997

Proj Purpose Measurements of salinity, fecal coliform, pH, DO, turbidity, nitrates, and orthophosphate in artificial wetland - 1996 and 1997.

Proj Usefulness measure of water quality in artificial wetland

Oranizations associated with this Project:

Commonwealth of Northern Marianas Islands - Department of Water Quality

Theme Keywords associated with Project

intertidal
nearshore
oceanic

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **AMME**

Topic Marine Project Title Commonwealth of the Northern Mariana Islands Water Quality Assessment 305(b) Report 1998

First Year: 1998 End Year: 1998 Status Complete Proj Duration 1 year

Data Type/Location

Comments: From annotated bibliography on Mariana islands research, from Reychelle Daniel

Data Collected 1998

Proj Purpose Includes overview of water quality, monitoring methods and incidences and causes of water pollution in the CNMI.

Proj Usefulness Addresses monitoring methods and possible pollution issues

Oranizations associated with this Project:

Commonwealth of Northern Marianas Islands - Department of Environmental Quality

Theme Keywords associated with Project

coral reef
fish
oceanic

Contact Persons associated with this Project:

Reychelle Daniel	Marine Workgroup Facilitator	US National Park Service

Publications associated with this Project:

PARK : **AMME**

Topic Marine Project Title Draft Long term marine monitoring plan for the Commonwealth of the Northern Mariana Islands

First Year: 1996 End Year: 1996 Status Complete Proj Duration

Data Type/Location ?

Comments: From annotated bibliography on Mariana islands research, from Reychelle Daniel

Data Collected 1996

Proj Purpose Draft of the long term marine monitoring plan for the Commonwealth of the Northern Mariana Islands, presumably details their plans for long term marine monitoring in and around AMME.

Proj Usefulness Could provide benchmark for what monitoring has taken place since 1996. Might also give ability to determine how their goals were met.

Oranizations associated with this Project:

- Commonwealth of Northern Marianas Islands - Coastal Resources Management
- Commonwealth of Northern Marianas Islands - Department of Environmental Quality
- Commonwealth of Northern Marianas Islands - Department of Fisheries and Wildlife

Theme Keywords associated with Project

- coral reef
- fish
- oceanic

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **AMME**

Topic Water Quality Project Title Groundwater quality and salinity (?)

First Year: End Year: Status In work Proj Duration

Data Type/Location ?

Comments: Theoretical project that Dwane Minton suggested should be in the realm of USGS - WRD.

Data Collected Groundwater lens levels in the Saipan aquifer, along with water quality measurements from any wells in and around AMME.

Proj Purpose Monitoring of groundwater levels and salinity for Saipan and consequently AMME.

Proj Usefulness ?

Oranizations associated with this Project:

- US Geological Survey

Theme Keywords associated with Project

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **AMME**

Topic Water Quality Project Title Hydrologic study of the AMME wetland

First Year: 2003 End Year: 2003 Status Complete Proj Duration

Data Type/Location AMME wetlands

Comments: Document from Dwane Minton (April 2002) which appears to be a completed survey of PACN vital signs. Question 8 is answered by saying the survey was completed and they are expecting data. This conflicts with other emails from Kimber (10/13/03) which indicates in her AMME summary that the survey is planned for FY05.

Data Collected GIS mapping, inventory of plant species, predator study for the endangered warbler.

Proj Purpose Water quality study of 300-acre wetland within AMME. Conducted last FY (according to Dwane Minton).

Proj Usefulness

Oranizations associated with this Project:	Theme Keywords associated with Project
US Geological Survey	intertidal
Commonwealth of Northern Marianas Islands - Department of Environmental Quality	nearshore
Commonwealth of Northern Marianas Islands - Department of Water Quality	watersheds

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **AMME**

Topic Marine Project Title Marine Monitoring Program

First Year: 1985 End Year: 1985 Status Complete Proj Duration

Data Type/Location CNMI - ?

Comments: From annotated bibliography on Mariana islands research, from Reychelle Daniel

Data Collected 1985 (?)

Proj Purpose Marine monitoring program

Proj Usefulness Provides information about the marine monitoring program at the CNMI-DEQ

Oranizations associated with this Project:	Theme Keywords associated with Project
Commonwealth of Northern Marianas Islands - Department of Environmental Quality	coral reef
	fish
	oceanic

Contact Persons associated with this Project:

Reychelle Daniel	Marine Workgroup Facilitator	US National Park Service

Publications associated with this Project:

PARK : **AMME**

Topic Marine Project Title Marine Monitoring Programs with sites adjacent to the park

First Year: End Year: Status In work Proj Duration

Data Type/Location ?

Comments: Contact field is not functional. Contacts are 1. CNMI_DEQ Peter houk, 2. CNMI-DFW - Erica Cochrane (670) 664-8300, 3. CNMI-CRM Kate Moots (670) 664-6019

Data Collected ?

Proj Purpose Dwayne Minton mentioned in the I&M survey that there are three local agencies collecting benthic habitat ad fisheries data, and that local CNMI agencies have a marine monitoring program with sites adjacent to their park. Dwayne suggested getting in touch with these contacts to see if they can provide more info.

Proj Usefulness ?

Oranizations associated with this Project:

- Commonwealth of Northern Marianas Islands - Department of Environmental Quality
- Commonwealth of Northern Marianas Islands - Department of Fisheries and Wildlife
- Commonwealth of Northern Marianas Islands - Coastal Resources Management

Theme Keywords associated with Project

- benthic
- fish

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **AMME**

Topic Geology Project Title National Volcanic Ash Advisory Center (VAAC)

First Year: 1980 End Year: 2004 Status In work Proj Duration ongoing

Data Type/Location Global satellite monitoring

Comments: No PI contact - ongoing computer-based monitoring program at NOAA, see website for more info

Data Collected Products:
Volcanic Ash Advisories (VAA)
The current VAA page is updated with each new advisory. When we can clearly see a plume of ash in satellite Imagery, it is graphically depicted, and sent to our message page.
Sample - From Soufriere Hills
A Graphic representation of the ash plume as seen on satellite imagery is attached to the message when available, but only on the Internet. (Graphic Sample).
After 15 days on the current page, VAA Messages are Archived by year. The current year archive is updated daily shortly after midnight UTC. Past Archives: 1999 ; 2000 ; 2001
Volcanic Ash Forecast Transport and Dispersion (VAFTAD) Model
This is a graphical forecast tool produced by NCEP which has been recently added to our web site. These operational VAFTADs are maintained on our site for approximately 15 days.
The VAFTAD Sample is from Soufriere Hills. It is part of a Paper presented at the Third Caribbean/South American Regional Air Navigation Meeting (abbreviated CAR/SAM/RAN/3) entitled Operations Of The Washington Volcanic Ash Advisory Center.
VAFTADs are also placed on the Internet by The Air Resources Lab (ARL) Here's a link to the current VAFTAD on their site (if one is current). They also run hypothetical VAFTADs.

Proj Purpose The National Center for Environmental Prediction (NCEP) of the National Weather Service (NWS) and the Satellite Analysis Branch (SAB) of the National Environmental Satellite, Data and Information Service (NESDIS), are jointly responsible for the activities of the Washington VAAC located in Camp Springs, Maryland. The Satellite Analysis Branch is responsible for monitoring all available satellite imagery for volcanic ash plumes and issuing Volcanic Ash Advisories (VAA). The National Center for Environmental Prediction is responsible for issuing Volcanic Ash Forecast Transport and Dispersion (VAFTAD) Models. Operation of the Washington Volcano Ash Advisory Center (VAAC) officially began November 1, 1997 although SAB has been monitoring volcanoes as far back as 1980.

Proj Usefulness Provides advance warning of volcanic ash eruptions, which are hazardous to agriculture, aviation, and some settlements.

Oranizations associated with this Project:

- National Oceanic and Atmospheric Administration

Theme Keywords associated with Project

- geology

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **AMME**

Topic Marine Project Title Nearshore reef fish population study: Reef fish population survey

First Year: 1988 End Year: 1988 Status Complete Proj Duration ?

Data Type/Location Tanapag Lagoon, Saipan

Comments: From annotated bibliography on Mariana islands research, from Reychelle Daniel

Data Collected 1988

Proj Purpose Survey of nearshore reef fish

Proj Usefulness good measure of reef health against how it was in 1988

Oranizations associated with this Project:

- Commonwealth of Northern Marianas Islands - Department of Fisheries and Wildlife

Theme Keywords associated with Project

- coral reef
- fish
- marine mammals
- oceanic

Contact Persons associated with this Project:

Reychelle Daniel	Marine Workgroup Facilitator	US National Park Service

Publications associated with this Project:

PARK : **AMME**

Topic Marine Project Title Nonpoint source marine monitoring program: First Year Report (draft)

First Year: 1996 End Year: 1996 Status Complete Proj Duration 1 year(?)

Data Type/Location ?

Comments: From annotated bibliography on Mariana islands research, from Reychelle Daniel

Data Collected 1996

Proj Purpose Examining non-point source marine issues (?)

Proj Usefulness Might provide a benchmark for marine conditions in location of project

Oranizations associated with this Project:

Commonwealth of Northern Marianas Islands - Coastal Resources Management

Theme Keywords associated with Project

coral reef
fish
oceanic

Contact Persons associated with this Project:

Reychelle Daniel	Marine Workgroup Facilitator	US National Park Service

Publications associated with this Project:

PARK : **AMME**

Topic Water Quality

Project Title Persistent Pollutants in Biotic Components of Tanapag Lagoon, Saipan, with Emphasis on Areas Impacted by Streams, Storm Water Runoff, and Sewer

First Year: End Year: Status Planned Proj Duration

Data Type/Location

Comments: "tanapag_monitoring" MS Word document from Kimber (12/16) the document is not dated, and gives no indication of when this survey was completed. It appears to be a proposal for future work….(This work has been completed, and the results are found in record #27).

Data Collected Tanapag Lagoon is a typical high-island barrier reef lagoon bordering the western shore of central Saipan. It is approximately 9 km long, 3 km at its widest point, and covers an area of around 13 km2. Large expanses of patch reef interspersed with sand and rubble provide for a diversity of shallow water habitats and harbor rich assemblages of flora and fauna (Doty and Marsh 1977, Amesbury et al. 1979). In addition to its ecological significance, the lagoon supports a variety of recreational activities and local people traditionally harvest many of its fisheries resources for food. Protecting and preserving this environment and its resources for future generations is therefore very important to the people of Saipan.

Proj Purpose The study will provide preliminary baseline data for of a range of persistent and potentially toxic contaminants in dominant flora and fauna from selected sites within Tanapag Lagoon. Moreover, it will indicate the distribution, abundance and bioindicator potential of key species and identify sites for future monitoring purposes. The initiation and development of such a database is vital to the management of Saipan's coastal waters. The data obtained will be useful in defining concentration gradients in the lagoon with respect to impacted streams, wastewater discharge points, storm water outlets, Saipan Harbor, the municipal dump and other potential sources of contamination situated along the coastline. It will allow for the identification of geographical and biological areas of concentration within the lagoon in addition to specific and possibly vulnerable foci within the biota. It will also facilitate a contaminant assessment of the area by reference to published data for similar and related species from other parts of the world. Species traditionally harvested for food will be evaluated for any potential health risks associated with their consumption and will be interest to the community at large. Overall, the study will provide the necessary foundations for the future assessment and regulation of pollution problems in the area, including a sensibly planned and readily implemented monitoring program.

The nature of the proposed study is primarily one of assessment monitoring. In scope, the project will consider a range of persistent and potentially toxic contaminants, in selected flora and fauna from within the prescribed area under investigation. The objectives of the study are as follows:

1. To determine the distribution and abundance of DDT and other chlorinated pesticides (aldrin, dieldrin, endrin, chlordane, lindane, etc.), PCBs, and a range of heavy metals (Ag, As, Cd, Cr, Cu, Hg, Ni, Pb, Sn and Zn), in selected biota from strategic locations within Tanapag Lagoon.

2. To identify 'hotspots' and delineate areas of contaminant enrichment within the study area.

3. To assess the degree of contamination in Tanapag Lagoon by reference to levels reported for clean and polluted environments elsewhere and with special reference to other tropical regions of the world, including Guam.

4. To evaluate potential health risks, if any, associated with the long-term consumption of edible resources surveyed (e.g. fish, shellfish).

5. To enhance Saipan's marine water quality monitoring program by identify potentially useful indicator species for continued monitoring purposes, and initiate the provision of a sound database with which future levels of contamination can be compared and evaluated.

Proj Usefulness

Oranizations associated with this Project:

Commonwealth of Northern Marianas Islands - Department of Environmental Quality

University of Guam

Theme Keywords associated with Project

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **AMME**

Topic Vegetation Project Title Planned Future Monitoring of Mangroves in AMME

First Year: 2004 End Year: 2005 Status Planned Proj Duration

Data Type/Location ?

Comments: Although Dwane Minton said there are no mangrove specific monitoring projects in existence, he is currently writing the scope of the proposed work. They want to identify mangrove species, describe the mangroves (densities and information such as birds/snails that are in association with those mangroves), pollen coring to determine original mangrove extent and see what possible species have gone extinct.

Data Collected Planned work, no data collected as of 12/2003

Proj Purpose Examination of mangroves in AMME

Proj Usefulness Provides information on mangrove extent and health

Oranizations associated with this Project:

Commonwealth of Northern Marianas Islands - Department of Environmental Quality

Theme Keywords associated with Project

nearshore

vascular plants

Contact Persons associated with this Project:

Reychelle Daniel	Marine Workgroup Facilitator	US National Park Service

Publications associated with this Project:

PARK : **AMME**

Topic Marine Project Title Report on surveys for monitoring the reefs of Saipan, Commonwealth of the Northern Mariana Islands

First Year: 1996 End Year: 1996 Status Complete Proj Duration 1 year (?)

Data Type/Location

Comments: From annotated bibliography on Mariana islands research, from Reychelle Daniel

Data Collected 1996

Proj Purpose Report on surveys for monitoring the reefs of Saipan. Presumably looks at surveys that have been made of the reefs in Saipan with the intent of monitoring their health (?), diversity (?).

Proj Usefulness Could provide good overview of reef surveys

Oranizations associated with this Project:

Theme Keywords associated with Project

coral reef

fish

oceanic

Contact Persons associated with this Project:

Reychelle Daniel	Marine Workgroup Facilitator	US National Park Service

Publications associated with this Project:

PARK : **AMME**

Topic Water Quality Project Title Screening biotic representatives from coastal sites within Tanapag Lagoon

First Year: 2003 End Year: 2003 Status In work Proj Duration

Data Type/Location Tanapag lagoon, Saipan

Comments: Proposal for this project is also included in this database, record #23

Data Collected Aqueous chemistry (?) data describing water quality.

Proj Purpose Screening biotic representatives from coastal sites within Tanapag Lagoon on Saipan for metals, PCBs, and pesticides.

They also looked at contaminants in sediments and biota from harbor locations on Guam.

Proj Usefulness Provides information on water quality adjacent to AMME national park and for Saipan's Tanapag Lagoon in general. Also provides proxy information on seepage from recently closed Puerto Rico dump.

Oranizations associated with this Project:

University of Guam

Theme Keywords associated with Project

intertidal

offshore

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **AMME**

Topic Marine Project Title Status of CNMI coral reefs: Current and proposed monitoring activities. In CNMI DFW Sportfish Restoration Research Program annual progress report

First Year: 2000 End Year: 2000 Status Complete Proj Duration

Data Type/Location

Comments: From annotated bibliography on Mariana islands research, from Reychelle Daniel

Data Collected

Proj Purpose Summary (?) of current (in 2000) and proposed monitoring activities in CNMI. Part of Sport Fish restoration research program.

Proj Usefulness

Oranizations associated with this Project:

Commonwealth of Northern Marianas Islands - Department of Fisheries and Wildlife

Theme Keywords associated with Project

coral reef

fish

oceanic

Contact Persons associated with this Project:

Reychelle Daniel	Marine Workgroup Facilitator	US National Park Service

Publications associated with this Project:

PARK : **AMME**

Topic | Project Title: Various Monitoring Projects Marked with a "C" in Table 1 of Water Quality Monitoring Workshop Summary, 12-14 August 2003

First Year: | End Year: | Status: In work | Proj Duration

Data Type/Location: AMME National Park, locations not specified

Comments: From Water Quality Monitoring Workshop (proceedings from 8/12-8/13/03 meeting in Kailua-Kona)

Data Collected: Long Term:
1. Beach Contaminants
2. Organic Enrichment Contaminants
3. Nearshore/coastal climate change, contaminants, organic enrichment, and sedimentation

Proj Purpose: (PI Contact is Eva DeDonato - is her position now occupied by Kimber DeVerse?)

Proj Usefulness

Oranizations associated with this Project:

Theme Keywords associated with Project

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **HALE**

Topic: Invasives | Project Title: Alien Plant Transects in Kipahulu

First Year: | End Year: | Status: In work | Proj Duration

Data Type/Location: ?

Comments: Lloyd (?) or Ellen

Data Collected: ?

Proj Purpose: No detail given by Ellen - she is asking Lloyd about it

Proj Usefulness: ?

Oranizations associated with this Project:

Theme Keywords associated with Project

nonvascular plants

vascular plants

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **HALE**

Topic: Invasives | Project Title: Argentine ant (Linepithema humile) population monitoring

First Year: | End Year: | Status: In work | Proj Duration

Data Type/Location: Sampling conducted annually.

Comments:

Data Collected: Measuring extent of populations by sampling presence/absence of ants around periphery of known populations.

Proj Purpose: Track extent of Argentine ant infestation in and around Haleakala.

Proj Usefulness: Show whether/how fast population is expanding, provide information on whether & how to implement control measures.

Oranizations associated with this Project:

Theme Keywords associated with Project

US Geological Survey

invertebrates

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **HALE**

Topic Project Title Argentine Ant Monitoring Survey

First Year: End Year: Status Proj Duration

Data Type/Location

Comments: Lloyd (?) and Ellen, details to follow in 2004.

Data Collected

Proj Purpose Email from Ellen, info from Lloyd, will expound later

Proj Usefulness

Oranizations associated with this Project: Theme Keywords associated with Project

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **HALE**

Topic Fauna Project Title Bird disease infection rate survey

First Year: End Year: 2003 Status Complete Proj Duration

Data Type/Location

Comments:

Data Collected Single trips to each site (Kipahulu valley, Molokai wet forest, NPSA) for 5-10 days. Mosquito traps and mist nets used to sample mosquitoes and birds. Larval surveys in pools also performed.

Proj Purpose Assess infection rates of avian malaria in wet forests.

Proj Usefulness Baseline data for monitoring

Oranizations associated with this Project: Theme Keywords associated with Project

US Geological Survey	birds
	invertebrates

Contact Persons associated with this Project:

Carter Atkinson	US Geological Survey
Dennis LaPointe	US Geological Survey

Publications associated with this Project:

PARK : **HALE**

Topic Terrestrial Invertebrates Project Title Bog Data

First Year: End Year: Status In work Proj Duration

Data Type/Location ?

Comments: Lloyd (?) or Ellen DeVerse

Data Collected ?

Proj Purpose Not known if this is ongoing - Ellen is calling Lloyd, and waiting to hear back

Proj Usefulness ?

Oranizations associated with this Project:

Theme Keywords associated with Project

- amphibian
- biological
- terrestrial mammals
- vascular plants
- watersheds

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **HALE**

Topic Landscape Project Title Changes in tree line is currently being studied.

First Year: End Year: Status In work Proj Duration

Data Type/Location

Comments:

Data Collected In progress

Proj Purpose Monitor changes in ecotone boundaries

Proj Usefulness

Oranizations associated with this Project:

Theme Keywords associated with Project

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **HALE**

Topic Landscape Project Title Interpreting Hawaiian culture

First Year: End Year: Status Planned Proj Duration

Data Type/Location

Comments:

Data Collected

Proj Purpose Kipuna meetings to discuss park resources

Proj Usefulness

Oranizations associated with this Project: Theme Keywords associated with Project

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **HALE**

Topic Fauna Project Title Predator trap line info

First Year: End Year: Status In work Proj Duration

Data Type/Location ?

Comments: Lloyd (?) or Ellen DeVerse

Data Collected ongoing

Proj Purpose Predator trap lines are checked at regular intervals, and data is collected on any species caught in the traps.

Proj Usefulness Was not set up to monitor anything, and doubtful that the data would be useful for establishing any trends.

Oranizations associated with this Project: Theme Keywords associated with Project

terrestrial mammals

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **HALE**

Topic Landscape Project Title Repeat photography of scenic vistas

First Year: End Year: Status In work Proj Duration

Data Type/Location

Comments:

Data Collected

Proj Purpose Comparing change over time

Proj Usefulness

Oranizations associated with this Project: Theme Keywords associated with Project

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **HALE**

Topic Vegetation Project Title Silversword Monitoring Survey

First Year: 1982 End Year: 2003 Status In work Proj Duration

Data Type/Location

Comments: Lloyd (?) and Ellen, details to follow in 2004.

Data Collected

Proj Purpose 1982-Present, more details forthcoming from Lloyd

Proj Usefulness

Oranizations associated with this Project: Theme Keywords associated with Project

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **HAVO**

Topic Project Title Interagency Monitoring of Protected Visual Environments (IMPROVE)

First Year: End Year: Status Proj Duration

Data Type/Location

Comments:

Data Collected

Proj Purpose the program is designed to establish current visibility and aerosol conditions in mandatory calss I areas, identify chemical species and emission sources responsible for man-made visibility impairment ; documanet long-term trends for assessing progress towards the national visibility goal, and provide regional haze monitoring representing all visibility protected federal class I areas where pratical.
IMPROVE monitors suspended particulate matter affecting visibilty.

Proj Usefulness

Oranizations associated with this Project: Theme Keywords associated with Project

US National Park Service

Contact Persons associated with this Project:

Fritz Klasner	Ecologist	US National Park Service

Publications associated with this Project:

PARK : **HAVO**

Topic Vegetation Project Title `Ohi`a lowland community restoration project-FMH plots

First Year: 2001 End Year: Status In work Proj Duration

Data Type/Location 25 FMH (Fire monitoring handbook) plots established in OHIA DIEBACK and GRASS removal areas off of Hilina Pali Rd where Seed Broadcast and Outplanting experiments are being conducted.

Comments: see also `Ohi`a lowland community restoration project-Seed Broadcast Success,`Ohi`a lowland community restoration project-Outplant success

Data Collected Baseline vegetation community information(Cover, frequency, density etc.) collected prior to the beginning of restoration activities, 2001

Proj Purpose Quantify long-term impacts of restoration activities (outplanting and seed broadcast)

Proj Usefulness Long-term monitoring of impacts of restoration efforts

Oranizations associated with this Project:	Theme Keywords associated with Project
US National Park Service	vascular plants

Contact Persons associated with this Project:

Kimberly Smith	Botanical Technician-Fire Effects	US National Park Service; HAVO Research Center, Res Mng
Rhonda Loh	Botanist	US National Park Service; HAVO Research Center, Res Mng

Publications associated with this Project:

HAVO Project Review # 2002-033 Refine techniques for revegetating dry ohia woodlands, R. loh 2002

HAVO Project Review# 2002-013, Rehab Ohia dry lowland forest, R. Loh, 2002

PARK : **HAVO**

Topic Vegetation Project Title `Ohi`a lowland community restoration project-Outplant success

First Year: 2002 End Year: Status In work Proj Duration plants to be monitored at 1 & 5 yrs following outplanting

Data Type/Location Hilina Pali rd.: one ohia dieback site(131 ac), one grass site(w/ 3 dif. Treatments)(100 ac). 12-16 native spp planted at high, med., low or 0 densities at nodes along transects . Initial outplant goals>7500 plants, have increased significantly

Comments: Outplanting ongoing;see also `Ohi`a lowland community restoration project-FMH Plots,`Ohi`a lowland community restoration project-Seed broadcast success

Data Collected Survivorship and vigor of individual outplanted plants monitored at 1 year.

Proj Purpose Restore `ohi`a lowland communities to conditions as natural as practicable . Full restoration is not expected, instead, the intent is to create modified native communities that are able to self-perpetuate, accepting that alien grasses remain important ecosystem componenets.
Monitor efficacy of different restoration techniques
Key Questions:
How does seedling recruitment differ between recipient vegetation microsites?
To what extent do grass removal techniques influence outplanting success and seedling recruitment?
What combination of outplanting and seed reintroduction will effectively meet management goals?

Proj Usefulness Relative success of outplanting of fire tolerant species in dieback area and grass area.
Relative success of outplanting at High ,Med, Low densities of plants.
Relative success of outplanting in grass areas following chemical, mechanical or no removal and in areas rototilled to imitate ungulate disturbance

comparison of outplanting and seedingareas in this area may allow managers to design more effective revegetation strategies

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

restoration
vascular plants
weed control

Contact Persons associated with this Project:

Kimberly Smith	Botanical Technician-Fire Effects	US National Park Service; HAVO Research Center, Res Mng
Rhonda Loh	Botanist	US National Park Service; HAVO Research Center, Res Mng

Publications associated with this Project:

HAVO Project Review # 2002-033 Refine techniques for revegetating dry ohia woodlands, R. loh 2002
HAVO Project Review# 2002-013, Rehab Ohia dry lowland forest, R. Loh, 2002

PARK : **HAVO**

Topic Vegetation Project Title `Ohi`a lowland community restoration project-Seed Broadcast Success

First Year: 2001 End Year: Status In work Proj Duration to be monitored up to 5yrs following last seeding date

Data Type/Location Hilina Pali:178 OHIA DIEBACK(131 ac)subplots treats: Herb.& Grass, No Herb. & Grass, Cinder, Native Shrub; 72 GRASS (100 ac)subplots treats: herbicide, mechanical, no control, rototilled
Each is seeded 2.5 m radius with low,med,or high seed conc.

Comments: Seed broadcast ongoing

Data Collected Seedling recruitment by height class in each of the control treatments and seeding treatments
Monitoring growth and surviriship of up to 5 tagged individuals of 6 different species in each sub-plot.

Seed recruitment to be monitored at 3 mo., 6 mo. , 1 yr, 2 yr, 5yr following seed broadcast
Tagged individuals to be monitored at 6 mo, 1 yr, 1.5 yr, 2yr following seed broaddcast

Proj Purpose Monitor efficacy of different restoration techniques

Restore `ohi`a lowland communities to conditions as natural as practicable .The intent is to create modified native communities that are able to self-perpetuate, accepting that alien grasses remain important ecosystem componenets.

Key Questions:
How does seedling recruitment differ between recipient vegetation microsites?
To what extent do grass removal techniques influence outplanting success and seedling recruitment?
What combination of outplanting and seed reintroduction will effectively meet management goals?

Proj Usefulness Relative success of native seed broadcast at High ,Med, Low densities of plants.
Relatiove success of seed broadcast in regions with differing vegetation, substrate
Relative success of seeding in grass areas following chemical, mechanical or no removal and in areas rototilled to imitate ungulate disturbance

comparison of outplanting and seeding areas in this area will help managers to design more effective revegetation strategies

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

restoration
vascular plants
weed control

Contact Persons associated with this Project:

Kimberly Smith	Botanical Technician-Fire Effects	US National Park Service; HAVO Research Center, Res Mng
Rhonda Loh	Botanist	US National Park Service; HAVO Research Center, Res Mng

Publications associated with this Project:

HAVO Project Review # 2002-033 Refine techniques for revegetating dry ohia woodlands, R. loh 2002

HAVO Project Review# 2002-013, Rehab Ohia dry lowland forest, R. Loh, 2002

PARK : **HAVO**

Topic Landscape Project Title Acoustic Data Report

First Year: End Year: Status Complete Proj Duration Oct 23, 2002- June 1, 2003

Data Type/Location long-term continuous 1/3 octave band sound levels, wind speed, and wind direction at 22 sites

Comments: Report generated by HMMH located on CD at I&M quarters 22 Hawaii Volcanoes National Park

Data Collected October 23, 2002 - June 1, 2003

Proj Purpose Characterize the soundscape of different acoustic environment in the park and provide baseline data for the developement of an upcoming Air Tour Manangement Plan.

Proj Usefulness NPS,FAA

Oranizations associated with this Project:

Theme Keywords associated with Project

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **HAVO**

Topic Vegetation Project Title Alien Plant Mapping in Hawaii Volcanoes National Park

First Year: End Year: Status Complete Proj Duration Repeated rounds of weed mapping on a 10-15 yr interval

Data Type/Location Initial foot surveys(Jan 01-Apr 02) along roads trails, fencelines; generation distribution and range maps for ~40 sp.; Perimeter searches for small populations; foot searches, transect work and helicopter searches for broad distributions

Comments:

Data Collected Invasive species along roads, trails and fencelines; species name, position approximate location.Initial Surveys did not indicate data on population size/density(Jan 2001-April 2002) Later surveys relied on Maps generated from initial survey data, historical distributions, alien plant control loacations. Small or localized populations were visited and mapped. Broader distributions were mapped via foot searches, transect work, helicopter searches.

Proj Purpose Map locations of alien plants in HAVO

Proj Usefulness Historical records of invasive plant distributions in HAVO
Comparison with earlier mapping projects could reveal long-term trends in weed communities

Oranizations associated with this Project:	Theme Keywords associated with Project
US National Park Service	vascular plants weed distribution

Contact Persons associated with this Project:

David Benitez	Research Project Specialist	US National Park Service; HAVO Research Center, RM-Veg office
Rhonda Loh	Botanist	US National Park Service; HAVO Research Center, Res Mng

Publications associated with this Project:

Unofficial Pub, Alien Plant Mapping in Hawaii Volcanoes National Park, 2001-2003; HAVO RM-VEG office, computer of D. Benitez

PARK : **HAVO**

Topic Invasives Project Title Alien Species Control: Feral Pigs

First Year: End Year: Status Complete Proj Duration

Data Type/Location

Comments:

Data Collected Data collected include hunting catches, snare catches, location, sex age, body measurements of the pigs captured. Transects monitored for pig sign twice a year once the unit was essentailly free of pigs.
Olaa forest: Koa unit 1989-1998
Puu Unit 1992-1996
Ag unit 1992-1996
Mauna Loa 1985-1993
Powerline 1984-1989
Kipuka Ki 1984-1989

Proj Purpose The purpose of this project was to erradicate feral pigs from fenced units within Hawaii Volcanoes National Park. The goal is a zero population for feral pigs.

Proj Usefulness This data can be useful to other investigators who have feral pig control projects on going or to be done in the future.

Oranizations associated with this Project:	Theme Keywords associated with Project
US National Park Service	terrestrial mammals

Contact Persons associated with this Project:

Howard Hoshide	Wildlife Biologist	US National Park Service

Publications associated with this Project:

PARK : **HAVO**

Topic | Project Title: An inventory and Assessment of Anchialine Pools in Hawaii Volcanoes National Park from Wahaula to Kaaha, Puna and Kau, Hawaii

First Year: | End Year: | Status | Proj Duration

Data Type/Location

Comments:

Data Collected

Proj Purpose: To inventory and evaluate the physical and biological resources associated with anchialine pools within HAVO, assess the scientific and natural value of the Park's pools , provide a compariative assessment with selected West Hawaii and Maui pools, suggest possible management strategies to preserve and restore the Park's native anchialine ecosystem.

Proj Usefulness

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

Contact Persons associated with this Project:

David Chai	Environmental Consultant	
Tim Tunison	Chief of Resources Management	US National Park Service

Publications associated with this Project:

CPSU Tech Report#69

PARK : **HAVO**

Topic: Vegetation | Project Title: ASK JIM JACOBI ABOUT VEG MONITORING

First Year: | End Year: | Status | Proj Duration

Data Type/Location

Comments: Unable to meet before the holidays-Jim held HI monitoring workshop some years back, would be a good person to contact to fill in the gaps

Data Collected

Proj Purpose

Proj Usefulness

Oranizations associated with this Project:

US Geological Survey

Theme Keywords associated with Project

vascular plants

Contact Persons associated with this Project:

Jim Jacobi	US Geological Survey; HAVO Research Center, Building 344

Publications associated with this Project:

PARK : **HAVO**

Topic Vegetation Project Title ASK KATHRYN ABOUT Kalij Phesant/ Plant interactionsSTUDY

First Year: End Year: Status In work Proj Duration

Data Type/Location

Comments: Unable to meet before holidays- refered by Linda Pratt

Data Collected Monitoring damage to seedlings & adult native plants, Montiorign damage to outplanted plantago sp on mauna loa

Proj Purpose Study impacts of Kalij phesants on vegetation in Kipuka Puaulu, Mauna Loa SEA.

Proj Usefulness

Oranizations associated with this Project:

Theme Keywords associated with Project

birds

vascular plants

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **HAVO**

Topic Vegetation Project Title ASK PETER VITOUSEK/GERALDO FARRINGTON ABOUT THURSTON GROWTH STUDY

First Year: End Year: Status In work Proj Duration

Data Type/Location

Comments:

Data Collected

Proj Purpose vegetation growth data from plots near thurston lava tube

Proj Usefulness

Oranizations associated with this Project:

Theme Keywords associated with Project

Stanford University

vascular plants

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **HAVO**

Topic Vegetation Project Title ASK RICK WARSHAUER ABOUT VEG MONITORING PROJECTS

First Year: End Year: Status Proj Duration

Data Type/Location

Comments: unable to meet before the holidays

Data Collected

Proj Purpose

Proj Usefulness

Oranizations associated with this Project:

Theme Keywords associated with Project

US Geological Survey

vascular plants

Contact Persons associated with this Project:

Rick Warshauer	Botanist	US Geological Survey; HAVO Research Center, Building 344

Publications associated with this Project:

PARK : **HAVO**

Topic Terrestrial Invertebrates Project Title Astelia invertebrate monitoring

First Year: 2002 End Year: Status In work Proj Duration

Data Type/Location Monitoring done at selected plants along transects 4B, 4C, 5B, & 5C. Invert types recorded & collected (if necessary).

Comments:

Data Collected Apr 2002-present: Monthly counts of invertebrates found in Astelia rosettes on four transects in Olaa Puu Unit.

Proj Purpose Monitor inverts found in Astelia rosettes due to their role as prey for naiads of Megalagrion koelense.

Proj Usefulness Document prey availability for naiads of M. koelense.

Oranizations associated with this Project:	Theme Keywords associated with Project
US Geological Survey	invertebrates

Contact Persons associated with this Project:

David Foote	Ecologist	US Geological Survey

Publications associated with this Project:

PARK : **HAVO**

Topic Fauna Project Title Biocomplexity: bird disease

First Year: End Year: Status In work Proj Duration

Data Type/Location Nine sites total, two in HAVO: Crater Rim Trail fence & Olaa Puu Unit. Others Keauhou Ranch (2, upper & lower), Cooper Center, Bryson cinder cone, Malama-Ki, Nanawale.

Comments:

Data Collected Monthly sampling from mosquito traps and mist netting of birds (DL). Mosquito & bird blood samples checked for malaria infection. Detailed vegetation sampling and phenology, quarterly bird density surveys (PH).

Proj Purpose Determine extent and intensity of avian disease in both mosquitoes and birds.

Proj Usefulness Shows boundaries of infection areas, mosquito populations, and resistance among birds.

Oranizations associated with this Project:	Theme Keywords associated with Project
US Geological Survey	birds invertebrates

Contact Persons associated with this Project:

Dennis LaPointe	US Geological Survey
Patrick Hart	US Geological Survey

Publications associated with this Project:

PARK : **HAVO**

Topic Fauna Project Title Biocomplexity: bird food base

First Year: 2002 End Year: Status In work Proj Duration

Data Type/Location Sampling done at 9 Biocomplexity sites, 2 within park at Crater Rim Trail fence and Olaa Puu Unit.

Comments:

Data Collected Started May 2002. Malaise traps checked every 4-6 weeks at all sites (see mosquito Biocomplexity entry for sites). Focus on braconid and ichneumonid parasitoids, others not identified as yet. Ohia bark and foliage snipped and examined for non-flying arthropods.

Proj Purpose Assess the variety and annual cycles of arthropod prey base for birds.

Proj Usefulness Relates parasite abundance and general insect abundance & diversity to bird populations.

Oranizations associated with this Project:

US Geological Survey

Theme Keywords associated with Project

birds

invertebrates

Contact Persons associated with this Project:

Dennis LaPointe	US Geological Survey

Publications associated with this Project:

PARK : **HAVO**

Topic Fauna Project Title Biocomplexity: bird food usage

First Year: 2002 End Year: Status In work Proj Duration

Data Type/Location At all 9 Biocomplexity sites.

Comments:

Data Collected Starting May 2002. Japanese white-eyes stomach-flushed and contents examined for identification of prey items. Insect parts identified as far as possible. Sampling done monthly. To include amakihi in 2004.

Proj Purpose Identify insects used as food and monitor seasonal changes.

Proj Usefulness Identify insects important to birds as protein source.

Oranizations associated with this Project:

US Geological Survey

Theme Keywords associated with Project

birds

invertebrates

Contact Persons associated with this Project:

Dennis LaPointe	US Geological Survey

Publications associated with this Project:

PARK : **HAVO**

Topic Vegetation Project Title Broomsedge burn-FMH Plots

First Year: 2001 End Year: 2003 Status Complete Proj Duration

Data Type/Location 30 FMH plots- 10 in 1x burned (broomsedge fire) 10 in 2x burned (broomsedge & Namakani fires), 10 in unburned area.

Comments:

Data Collected Cover, Shrub density, Tree stand structure, Frequency (sp list) are read for each plot at 1 yr, 3yr. From the end of the burn. May reread at a later date if funding becomes available,or the area burns again

Proj Purpose Monitoring to compare vegetation in an unburned area, and areas burned 1x and 2x by wildfire. Restoration efforts ongoing in the two burned areas. Documenting the effects of restoration efforts and possible differences in recovery due to # of times burned. Establish monitoring plots in case of future fires in the area

Proj Usefulness effects of multiple burns on restoration efforts
outplant success

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

fire effects
restoration
vascular plants

Contact Persons associated with this Project:

Rhonda Loh	Botanist	US National Park Service; HAVO Research Center, Res Mng
Sierra McDaniel	Nursery Manager?	US National Park Service; HAVO Research Center RM -Nursery office

Publications associated with this Project:

Unpublished,A proposal to rehabilitate the Broomsedge Fire, HAVO, R Loh & T. Tunison , 2000-RM Nursery Files

Unpublished, Rehabilitation efforts in the Broomsedge Fire:Progress Report 10/1/01, R.Loh- HAVO RM Nursery Files

PARK : **HAVO**

Topic Vegetation Project Title Broomsedge Burn-Outplant & Seed Broadcast success

First Year: 2000 End Year: 2003 Status Complete Proj Duration

Data Type/Location 60 15m radius seedrecruitment plots: 30 seeded & 30 not seedes

Comments: funding dependent-may be revisited at a later date to assess long-term outplant success

Data Collected None being collected currently. Seedling recruitment, outplant survivorship. Monitoring of up to 5 tagged individuals in each size class for each speceis in each plot

Proj Purpose Monitoring to assess vegetation recovery in areas burned 1x and 2x by wildfire. Restoration efforts ongoing in the two burned areas. Documenting the effects of restoration efforts and possible differences in recovery due to # of times burned.

Proj Usefulness useful for determining effective restoration techniques, variance in seedling recruitment and outlaplant success in burned1x and2x areas

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

fire effects
restoration
vascular plants

Contact Persons associated with this Project:

Rhonda Loh	Botanist	US National Park Service; HAVO Research Center, Res Mng
Sierra McDaniel	Nursery Manager?	US National Park Service; HAVO Research Center RM -Nursery office

Publications associated with this Project:

Unpublished,A proposal to rehabilitate the Broomsedge Fire, HAVO, R Loh & T. Tunison , 2000-RM Nursery Files

Unpublished, Rehabilitation efforts in the Broomsedge Fire:Progress Report 10/1/01, R.Loh- HAVO RM Nursery Files

PARK : **HAVO**

Topic | Project Title: CASTNET Air Quality Monitoring

First Year: | End Year: | Status | Proj Duration

Data Type/Location

Comments:

Data Collected: At site HVT424HVT424 (Hawaii Volcanoes NP)
Deposition Profile
Composition of total nitrogen deposition by species Trends in total nitrogen deposition Trends in wet and dry nitrogen deposition
Composition of total sulfur deposition by species Trends in total sulfur deposition Trends in wet and dry sulfur deposition
Site Profile
Site name Hawaii Volcanoes NP
County Hawaii
State HI
Latitude 19.4197 decimal degrees
Longitude -155.2400 decimal degrees
Elevation 1199 meters
Operating agency NPS
Landuse surrounding site Forest/Tropical
Terrain surrounding site Complex
Site code for nearest NADP wet deposition site
Distance to nearest NADP site 0.0 km
Does site conform to assumptions of MLM? No

Proj Purpose: To monitor trends in dry deposition particular matter

Proj Usefulness

Oranizations associated with this Project: | Theme Keywords associated with Project

US National Park Service

Environmental Protection Agency

Contact Persons associated with this Project:

Fritz Klasner	Ecologist	US National Park Service

Publications associated with this Project:

PARK : **HAVO**

Topic: Vegetation | Project Title: Clermontia Hawaiiensis monitoring at Puu Huluhulu

First Year: 1997 | End Year: 1998 | Status: Complete | Proj Duration: 2 seasons

Data Type/Location: Intuitive controlled survey- walking around looking for plants. Wider plant survey done- more emphasis in areas where known populations existed. Looked in areas where older surveys were conducted.

Comments: Disscussed with Linda Pratt, unable to meet with Thomas before Holidays

Data Collected: Location and number of plants within the pit crater. Measurements include basal diameter, height, phenology, and elevation.

Proj Purpose: Survey for Clermontia Hawaiiensis in Puu Huluhulu SEA

Proj Usefulness

Oranizations associated with this Project: | Theme Keywords associated with Project

US National Park Service

Contact Persons associated with this Project:

Thomas Belfield		US National Park Service; HAVO Research Center, Res Mng
Linda Pratt	Botanist	US Geological Survey; HAVO Research Center, Building 216

Publications associated with this Project:

PARK : **HAVO**

Topic | Project Title: Coastal Strand Community Restoration project- NEED TO TALK TO THOMAS

First Year: | End Year: | Status | Proj Duration

Data Type/Location

Comments: Unable to discuss before the holidays,

Data Collected

Proj Purpose

Proj Usefulness

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

Contact Persons associated with this Project:

Thomas Belfield		US National Park Service; HAVO Research Center, Res Mng
Tim Tunison	Resource Management Division Head	US National Park Service; HAVO Research Center, RM admin office

Publications associated with this Project:

PARK : **HAVO**

Topic: Vegetation | Project Title: Coastal Strand Rare Plant Monitoring

First Year: | End Year: | Status: In work | Proj Duration: ongoing

Data Type/Location: Survyes done by initiative control- basically walking throughout this area and looking for these plants. Populations were monitored by returning to the same populations.

Comments: Project initiated by Jonathan Chase, Thomas & I were unable to meet before the holidays, he will be available in January-ics LISTED IN 2001 HAVO PROJECT REVIEWS. Also, David Plumbo (?) did some early work on this project.

Data Collected: Presence.

Proj Purpose: To monitor existing and searching for Sesbania tomatosa

Proj Usefulness

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

rare etc.

restoration

vascular plants

Contact Persons associated with this Project:

Linda Pratt	Botanist	US Geological Survey; HAVO Research Center, Building 216
Thomas Belfield		US National Park Service; HAVO Research Center, Res Mng

Publications associated with this Project:

HAVO Project Review#2001-028, Restore Coastal Strand Community at Kahue, Chase/ Tunison 2001

PARK : **HAVO**

Topic Vegetation | Project Title Complete reintroduction of endangered Silversword

First Year: 2000 | End Year: | Status In work | Proj Duration scheduled forstart FY04-05, follows earlier preliminary outplantings

Data Type/Location Mauna Loa Strip Road , In and near exclosures at 7000 and 6800 ft elevation, Kipuka Kulalio, Kipuka Maunaiu, Mauna Loa Trail-above trailhead & below ungulate fence

Comments: Unable to interview Ane/Tim before holiday, Also see earlier Silversword Projects (starting 1998?)

Data Collected Height , rosette diameter,vigor, mortality, phenology monitored at 6 month intervals for the first year, and yearly intervals after that
Natural seedling recruitemnt also monitored.
Future years will monitor phenology for all plants in the reintroduced population and track subsequent seedling establishment

Proj Purpose Measure growth and determine mortality of a 10% subset of 125000 out-planted silverswords on Mauna Loa

Proj Usefulness Determine success of restoration programs for Silversword,Genetic considerations

Oranizations associated with this Project:

- US National Park Service
- Hawaiian Silversword Foundation
- Volcano Rare Plant Facility
- University of Hawaii - Manoa

Theme Keywords associated with Project

- rare etc.
- restoration
- vascular plants

Contact Persons associated with this Project:

Ane Bakutis	Graduate Student	University of Hawaii - Manoa
Linda Pratt	Botanist	US Geological Survey; HAVO Research Center, Building 216
Patty Moriyatsu	master horticulturalist, facility director	Volcano Rare Plant Facility
Rob Robichaux	President	Hawaiian Silversword Foundation; www.silversword.org
Tim Tunison	Resource Management Division Head	US National Park Service; HAVO Research Center, RM admin office

Publications associated with this Project:

- HAVO Project Review# 2003-035 Complete Reintroduction of Endangered Silversword, Tim Tunison , 2003
- HAVO Project Review#2002-06, Outplant Silverswords, Tim Tunison 2002

PARK : **HAVO**

Topic Fauna Project Title Dark-Rumped Petrel Monitoring Program

First Year: End Year: Status In work Proj Duration

Data Type/Location

Comments:

Data Collected Nest location, colony location,nest success, night time activity, taped vocalizations?

Monitoring has been done continuously for the 2001-2003 nesting seasons
Initial monitoring was done during the 1994 and 1995 nesing seasons

Proj Purpose Monitoring of known Dark-Rumped Petrel nests on Mauna Loa colonies, nest success, and to see if the cat trapping effort has made a difference in nesting success.

Proj Usefulness

Oranizations associated with this Project:	Theme Keywords associated with Project
US National Park Service	birds

Contact Persons associated with this Project:

Darcy Hu	Ecologist	US National Park Service
Roberta Swift	Biological Technician	US National Park Service

Publications associated with this Project:

USFWS Annual reports

PARK : **HAVO**

Topic Project Title Faya Tree removal & forest recovery project

First Year: End Year: Status In work Proj Duration

Data Type/Location

Comments:

Data Collected

Proj Purpose Comparing recovery of forest understory following removal of Myrica faya with several different methods.

Proj Usefulness

Oranizations associated with this Project:	Theme Keywords associated with Project
US National Park Service	

Contact Persons associated with this Project:

Rhonda Loh	Botanist	US National Park Service; HAVO Research Center, Res Mng

Publications associated with this Project:

HAVO Project Review #2001-002, Faya Tree Understory Restoration,Rloh, 2000

PARK : **HAVO**

Topic | Project Title: Feral Goat Control

First Year: | End Year: | Status | Proj Duration

Data Type/Location

Comments:

Data Collected: Resources Management has catch summaries

Proj Purpose: The initial goal of the feral goat control project at Hawaii Volcanoes National Park was to remove all goats within the park boundaries. The initial goal was basically met, and monitoring of ingress to the park continues. Using the "Judest Goat" protocols where an individual goat is radio collared and released, then joins up with an existing herd. These"Judest goats" are monitored every three months, and individuals of the herd are shot, except for the Judest goat. Monitoring is done on Mauna Loa, East Rift of Kilauea, and the Great Crack

Proj Usefulness

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

Contact Persons associated with this Project:

Howard Hoshide	Wildlife Biologist	US National Park Service
Larry Katahira	Ecologist	US National Park Service

Publications associated with this Project:

PARK : **HAVO**

Topic: Geology | Project Title: Gas/ Geochem Monitoring of Kilauea Volcano

First Year: 1979 | End Year: | Status | Proj Duration: on-going

Data Type/Location

Comments:

Data Collected

Proj Purpose: At Kilauea (HAVO), sulfur dioxide (SO2) emission-rate measurements have been collected nearly weekly since 1979 using a correlation spectrometer (COSPEC). These measurements constitute an unusually complete data set. Chemical analysis of gas samples taken from volcanic vents at the summit and rift zones of Kilauea and Mauna Loa has helped to improve models of how these volcanoes release volatiles. Carbon/sulfur ratios are measured about weekly at the summit of Kilauea. A network of continuously monitoring stations using chemical sensors for individual gas species is under development

Proj Usefulness

Oranizations associated with this Project:

Hawaiian Volcano Observatory

Theme Keywords associated with Project

geology

Contact Persons associated with this Project:

Jeff Sutton	Geochemist	Hawaiian Volcano Observatory
Tamar Elias	Geochemist	Hawaiian Volcano Observatory

Publications associated with this Project:

PARK : **HAVO**

Topic Air Quality Project Title Gaseous Pollutant Monitoring Network, NPS Air Resources Division

First Year: End Year: Status Proj Duration

Data Type/Location

Comments:

Data Collected

Proj Purpose Gaseous Pollutant Monitoring is a widespread and significant concern, especially on the island of Hawaii, in conjunction with active and long-term ongoing volcanic emissions. The NPS Air Resources Division, Gaseous Pollutant Monitoring Network sponsors 3 sites in HAVO, collecting ambient & real-time concentration data (2 operated by USGS-HVO [adjacent to the HVO offices and another behind the park Kilauea Visitor Center] and 1 operated by USGS-PIERC[near Thurston lava tube]). These sites collect some similar, and some unique data parameters, identified below. Various health related have both active and passive sensors throughout the island of Hawaii, especially in the windward vicinity of Pu'u O'o vent and downwind (leeward) areas of the island especially prone to vog. Emissions (volcanic) are of interest to USGS-HVO as well as parks with active volcanoes, currently focused on HAVO.
Ozone (O3) is monitored continuously, real-time behind HAVO Thurston Lava tube (as part of the NPS gaseous pollutant network).
CO2 monitoring in PACN parks is primarily focused on volcanic emissions. Work by USGS-HVO includes data collection on real-time concentrations downwind of fumarolic vents, emission rates from Kilauea summit, and mapping ground level concentrations w/in Kilauea summit caldera.
In addition, the long-term monitoring of CO2 levels at NOAA CMDL Observatories (especially Mauna Loa,) is a global standard for atmospheric CO2 monitoring.
SO2 is monitored continuously, real-time behind KVC and at HVO (as part of the NPS gaseous pollutant network, with these two sites operated by USGS-HVO)
1.Passive sensors
2.Huebert: starting to investigate spatial variability (along w/NO2)
3.HVO
a.Real-time concentrations downwind of fumarolic vents (HVO research)
b.Emission rates from Kilauea summit (COSPEC)
c.Ground level concentrations w/in Kilauea summit

Proj Usefulness

Oranizations associated with this Project:

US National Park Service
US Geological Survey

Theme Keywords associated with Project

atmospheric
geology

Contact Persons associated with this Project:

Fritz Klasner	Ecologist	US National Park Service
Tamar Elias	Geochemist	Hawaiian Volcano Observatory

Publications associated with this Project:

PARK : **HAVO**

Topic Geology Project Title Geology (Current Eruption monitoring)

First Year: End Year: 2003 Status In work Proj Duration

Data Type/Location Usually at or near the current eruption site, P`u O`o cone

Comments: Tim Orr (torr@usgs.gov)

Data Collected Mapping of new lava flows, sampling of new lava, aerial reconnaissance of volcanic activity

Proj Purpose Weekly monitoring (visual and physical sampling and mapping) of current eruption at P`u O`o vent.

Proj Usefulness Adds to extensive catalogue of data collected at HVO over the years describing volcanic activity in Hawaii

Oranizations associated with this Project:

US Geological Survey

Theme Keywords associated with Project

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **HAVO**

Topic Vegetation Project Title Global Change Research Project:Astelia Leaf Demography monitoring

First Year: 2001 End Year: Status In work Proj Duration

Data Type/Location HAVO, `Ola`a Tract, Pu`u Unit, Transects 4B & 5B, 15 plants per transect, 4 rosetes per plant

Comments:

Data Collected Maximum Leaf Width, % necrosis is recorded for each leaf on selected rosettes once a month. Emergence of new leaves and death of leaves is recorded once a month.

Proj Purpose Monitor Leaf demography of Astelia menziesiana (Host plant for Megalagrion koelense) in order to detect growth rates and assess approximate time necessary to restablish populations with individual plants large enough to support M. Koelense in areas where previously extripated by pigs.

Proj Usefulness Leaf growth rates

Oranizations associated with this Project:

US Geological Survey

Theme Keywords associated with Project

invertebrates

vascular plants

Contact Persons associated with this Project:

Cynthia King	Biological Technician	US Geological Survey; HAVO Research Center, Building 216
David Foote	Ecologist	US Geological Survey; HAVO Research Center, Building 216

Publications associated with this Project:

Unofficial Pub, Astelia Leaf Demography Protocols, Research Center , Building 216, Office of L. Wilson

PARK : **HAVO**

Topic Project Title Ground Deformation Monitoring

First Year: End Year: Status Proj Duration

Data Type/Location

Comments:

Data Collected

Proj Purpose HVO collects accurate and timely ground-deformation data to monitor Hawaiian volcanoes. Data from tiltmeters are sampled every 10 minutes and provide the only real-time deformation monitor (HAVO). Continuous Global Positioning Survey (GPS) data are sampled every 30 seconds, but they currently download the data only once a day and calculate one-day average positions (HAVO). HVO conducts periodic (one or more times per year) leveling, GPS, EDM (electronic distance measurement) and dry tilt surveys (HAVO, HALE, PUHO, PUHE, KAHO). Each survey or data point can be compared with previously sampled data to determine accumulated ground deformation and to calculate strain rates or velocities. HVO is currently upgrading its deformation-monitoring program to emphasize real-time monitoring of Mauna Loa and Kilauea. This upgrade includes new installations of borehole dilatometers and tiltmeters, new installations of continuously recording GPS receivers, improved data logging and telemetry, and development of strain analysis and pattern recognition software.

Proj Usefulness

Oranizations associated with this Project:

Hawaiian Volcano Observatory

US National Park Service

Theme Keywords associated with Project

Contact Persons associated with this Project:

Maurice Sako	Deformation Technician	Hawaiian Volcano Observatory
Peter Seville	Head of Deformation	Hawaiian Volcano Observatory

Publications associated with this Project:

PARK : **HAVO**

Topic Terrestrial Invertebrates Project Title HAVO Lepidoptera survey

First Year: 1994 End Year: 1995 Status Complete Proj Duration

Data Type/Location Monitoring stations set up at Keamoku flow, Kipuka Ki, quarters 22, nr. Volcano House, field station, Thurston lava tube, & Olaa Ag Unit at UH farm. Monitoring done monthly during week of new moon, July 1994-March 1995.

Comments:

Data Collected Observations of moths at fluorescent and blacklights at various locations in the park.

Proj Purpose Survey & monitor moths in the park. Data can be compared to that done by C. J. Davis in 1940's.

Proj Usefulness Provides snapshot of moth abundance and diversity over a year at multiple locations in the park. Compare to similar data collected in the past.

Oranizations associated with this Project:	Theme Keywords associated with Project
US Geological Survey	invertebrates

Contact Persons associated with this Project:

David Foote	Ecologist	US Geological Survey

Publications associated with this Project:

PARK : **HAVO**

Topic Invasives Project Title HAVO Vespula monitoring

First Year: 1993 End Year: Status In work Proj Duration

Data Type/Location Traps baited with heptyl butyrate attractant checked monthly; wasps in each trap counted, queens counted separately.

Comments:

Data Collected site/traps/dates
Hilina Pali shelter: 10, Jul 1999-
Muliwai Kipuka: 10, Jul 1999-
Aloha Estates (outside park): 10, Feb 2000-
Kipuka Nene Campground: 10, Feb 1998-Sep 1999
Kulanokuaiki Campground: 10, Feb 2000-
Mauna Ulu flow: 10, Dec 1997-
Volcano Transfer Station: 10, Jul 1999-
Kipuka Ki: 40, Apr 1996-
Kipuka Puaulu: 40, Apr 1996-
Olaa Koa Unit & Small Tract: 20, Jul 1993-
Keamoku: 20, Jul 1993-
Kulani Boys Home (outside park): 20, Jul 1993-
Kulani Cone (outside park): 20, May 1996-

Namakani Paio: 10, Feb 1998-Jul 1999
Crater Rim Trail: 20, May 1998-Jul 1999
Volcano House: 20, Dec 1997-Jul 1999
Ainahou Ranch: 20, Nov 1997-Jul 1999; 10, Jul-Aug 1999
Kapapala: 20, Nov 1997-Jun 1999; 10, Jul-Sep 1999
Ainapo: 10, Jul-Sep 1999

Proj Purpose Tracking seasonal and year-to-year trends in Vespula populations.

Proj Usefulness Provides data on Vespula populations throughout park over long term.

Oranizations associated with this Project:	Theme Keywords associated with Project
US Geological Survey	invertebrates

Contact Persons associated with this Project:

David Foote	Ecologist	US Geological Survey

Publications associated with this Project:

PARK : **HAVO**

Topic | Project Title: Hawaii Forest Bird Surveys

First Year: | End Year: | Status | Proj Duration

Data Type/Location

Comments:

Data Collected

Proj Purpose: Forest bird surveys in HAVO ceased in the mid 1990s. This monitoring program provided critical information on bird distribution and densities along moisture and elevational gradients. HAVO is uniquely situated along a moisture gradient (<1000 - > 4000 cm annual rainfall) ranging from wet to mesic to dry forests. Monitoring bird populations along this gradient provides insight into ecological dynamics and population responses not available elsewhere. The park provided the only recent source of forest bird data along an elevational gradient (2000 – 7000 ft.; East Rift Zone to Mauna Loa Strip transects). Additionally, a long term monitoring program is essential to determining population fluctuations and changes, and species' range contractions/expansion

Proj Usefulness

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

Contact Persons associated with this Project:

Howard Hoshide	Wildlife Biologist	US National Park Service

Publications associated with this Project:

PARK : **HAVO**

Topic: Marine | Project Title: Hawksbill turtle monitoring program

First Year: 1989 | End Year: | Status: In work | Proj Duration: 1989 to on going

Data Type/Location

Comments:

Data Collected: Daily & nightly nesting activity during the nesting season (end-May to early to late December)
Predator information

Proj Purpose: Documentation of nesting activity of the endangered Hawksbill turtle at HAVO beaches, and nesting beaches located outside of the National Park (Kamehame). Hawksbill turtles (federally listed as endangered) frequently nest on beaches within the park. Turtle nesting has been observed at three beaches: Halapae, Keauhou Landing, and Apua, with Apua having the longest history of documented nesting. Nesting at Apua is also the most consistent, occurring every year. The park has only recently started observing nesting at Halape and Keauhou, so data at these beaches is limited. Data for other beaches does not exist.

Proj Usefulness: Methods of collection if investigators have nesting turtles in their park.

Oranizations associated with this Project:

US National Park Service

NOAA, National Marine Fisheries Service

Theme Keywords associated with Project

reptile

Contact Persons associated with this Project:

Larry Katahira	Ecologist	US National Park Service
William Seitz	Field Supervisor	US National Park Service

Publications associated with this Project:

PARK : **HAVO**

Topic Vegetation Project Title Kipuka Ki Rare Plant Monitoring

First Year: End Year: Status Complete Proj Duration 1 season

Data Type/Location One time study- not sure of year (might be 1996)

Comments: We were unable to meet before the holidays, he will be available in January-ics

Data Collected Collected dbh and mapped rare tree and plant species (mayoporum, others- see Kipuka Ki Rare Plant Survey Master Data). Recorded alien plant species- presense near rare tree species (within a certain radius of tree base). MS = mayoporum sand. Also looked at phenology and weed species associated. Rat damage. Made own temporary transects. Linda might have the transect methodology. Transects every 50 m across width of SEA. Look at kipuka.apr.

Proj Purpose To survey for rare plants (endangered and threatened) at Kipuka Ki SEA

Proj Usefulness

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

rare etc.

vascular plants

Contact Persons associated with this Project:

Linda Pratt	Botanist	US Geological Survey; HAVO Research Center, Building 216
Thomas Belfield		US National Park Service; HAVO Research Center, Res Mng

Publications associated with this Project:

PARK : **HAVO**

Topic Vegetation Project Title Koa recovery inside and outside experimental ungulate proof fence exclosures in Kahuku

First Year: 2003 End Year: 2005 Status Planned Proj Duration

Data Type/Location 3 paired 35x 35 m treatment plots located in 3 kipuka in Kahuku-one plot fenced (ungulates excluded , one unfenced

Comments: Data from Draft Kahuku Koa recovery proposal from rloh computer

Data Collected Species richness(at 0, 2 yr)
cover along threee,30m long transects(at 0, 2 yr)
stem density of Koa,koa size classes, (0,6,12,18,24 mo.)
survivorship/ damage of a tagged subset of koaseedlings(6,12,18,24mo.)
Initial Baseline monitoring to be completed soon(Dec 2003?)

Proj Purpose Evaluate natural recovery of Acacia Koa by root sprouting and/ or seedlings in previously logged forests in kahuku Ranch.
Measure the response of alien and native plants to release from ungulate pressure

Proj Usefulness What is the natural recovery of Koa in Kahuku in the absence of feral ungulates?
What is the species composition of rare and alien plants in Kahuku?

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

feral ungulates

vascular plants

weed distribution

Contact Persons associated with this Project:

David Benitez	Research Project Specialist	US National Park Service; HAVO Research Center, RM-Veg office
Kimberly Smith	Botanical Technician-Fire Effects	US National Park Service; HAVO Research Center, Res Mng
Rhonda Loh	Botanist	US National Park Service; HAVO Research Center, Res Mng

Publications associated with this Project:

HAVO Project Review# 2003-047, Experimental Ungulate Exclosure Fences(Kahuku -west), Loh, 2003

PARK : **HAVO**

Topic Terrestrial Invertebrates Project Title Long Substrate Age Gradient (LSAG) soil fauna

First Year: 1998 End Year: Status In work Proj Duration

Data Type/Location Three soil cores taken in each LSAG N and control plot. Each sample consists of a litter sample and two soil cores taken from beneath the litter area. Three pitfall traps were set up in each plot.

Comments:

Data Collected Jun 1998 - pitfall traps, soil samples, and physical measurements taken at four LSAG sites (Thurston, Laupahoehoe, Kohala, Kokee).

Proj Purpose Compare soil mesofauna in nutrient-enriched plots with natural plots along the Stanford LSAG. Coordinated with Low Density Pig Project sampling at Olaa and Kamakou, Molokai.

Proj Usefulness Provides information on effects of nutrient enrichment on soil mesofauna. Addition of N is analogous to presence of pigs.

Oranizations associated with this Project:	Theme Keywords associated with Project
US Geological Survey	invertebrates

Contact Persons associated with this Project:

David Foote	Ecologist	US Geological Survey

Publications associated with this Project:

PARK : **HAVO**

Topic Terrestrial Invertebrates Project Title Low Density Pig Project

First Year: 1996 End Year: Status In work Proj Duration

Data Type/Location 20 x 20 m plots set up near the fence boundary, one on each side. Three pairs of plots are set up: upper, lower and new fence. 20 sampling stations in each plot, 1 m apart, soil & litter samples taken periodically.

Comments:

Data Collected Jul 1996 - all pitfalls & odd-numbered soil samples at upper & lower plots
Aug 1996 - even-numbered soil samples at upper & lower plots
Jan 1997 - pitfalls at upper & lower plots, odd-numbered soil samples at new fence plots
Feb 1997 - even-numbered soil samples at new fence plots
Sep 1997 - all soil sites sampled at new fence plots
Nov 1997 - all pitfalls at new fence plots
Inverts sorted to order, Collembola to species.

Proj Purpose Comparing soil fauna at wet forest sites with low densities of pigs with plots from which pigs have been excluded to see if complete eradication of pigs is necessary for forest recovery. Part of a large program also looking at nutrients and flora.

Proj Usefulness Indicates whether, for soil mesofauna, total exclusion of pigs is necessary or if keeping population at low levels by hunting is sufficient to remove impacts.

Oranizations associated with this Project:	Theme Keywords associated with Project
US Geological Survey	invertebrates terrestrial mammals

Contact Persons associated with this Project:

David Foote	Ecologist	US Geological Survey

Publications associated with this Project:

PARK : **HAVO**

Topic Fauna Project Title Low Density Pig Project-Feral Pig Activity Monitoring

First Year: 1993 End Year: Status In work Proj Duration

Data Type/Location Transects of varying length in the fenced and unfenced areas in the East Rift Zone. Transects in Ola'a tract Pu`u Unit, New exclosure, unfenced area and adjacent Puu Makaakla NAR. Methods used are those developed by Anderson and Stone 1994.

Comments:

Data Collected Feral Pig activity surveys, density estimates conducted quarterly then annually over a ten year period. No data is currently being collected, but could be restarted.

Proj Purpose Part of a project comparing the ecosystem-level effects of low density feral pig populations on the islands of Hawaii and Molokai. Estimate feral pig activity in areas with differing levels of control.

Proj Usefulness compare feral pig densities in areas with differing levels of control, levels of damage, concurent studies are examining focal groups of invertebrates and plants in the 4 Olaa units

Oranizations associated with this Project:

US Geological Survey

The Nature Conservacny -Hawaii

Stanford University

Theme Keywords associated with Project

feral ungulates

Contact Persons associated with this Project:

David Foote	Ecologist	US Geological Survey; HAVO Research Center, Building 216

Publications associated with this Project:

Draft Technical Report,Summary of pig density estimates in Hawaii Volcanoes National Park and adjacent conservation areas (1993-2003). I.Stout, D. Foote

PARK : **HAVO**

Topic Vegetation Project Title Low Density Pig Project-vegetation

First Year: 1997 End Year: 2003 Status Complete Proj Duration

Data Type/Location `Ola`a tract: Pu`u Unit, 'new exclosure" and unfenced area; Pu`u Maka`ala NAR. 6 paired 20 x20 m vegetation plots near exclosure boundaries (each plot in exclosure paired with one nearby not protected from pigs)

Comments: Similar study completed in Kamakou Preserve, Molokai

Data Collected ground cover, pig -sensitive(prefered forage) species counted and measures, alien plant frequency determined and cover-abundance estimated with Braun-Blanquet scale
Established 1997, remonitored in 2003

Proj Purpose Determine effects on vegetation of low density feral pig populations

Proj Usefulness Established plots for studying impacts of varying densities of feral pigs on montane wet forest vegetation.
How does vegetation react to removal/ reduced density of feral pigs? Do prefered forage species (Hapuu, Astelia, Cyaneas, Clermontias etc.) rebound following removal of pigs? Are there significant differencesin vegetation between areas with low-density pig populations and pig free areas?

Oranizations associated with this Project:

US Geological Survey

Theme Keywords associated with Project

feral ungulates

nonvascular plants

vascular plants

weed distribution

Contact Persons associated with this Project:

Linda Pratt	Botanist	US Geological Survey; HAVO Research Center, Building 216

Publications associated with this Project:

PARK : **HAVO**

Topic Vegetation Project Title LUHI FIRE REHAB--NEED TO DISCUSS WITH RHONDA/TIM

First Year: End Year: Status Planned Proj Duration

Data Type/Location

Comments: LISTED IN 2003 HAVO PROJECT REVIEWS-will this have a monitoring component?

Data Collected

Proj Purpose

Proj Usefulness

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

fire effects

restoration

vascular plants

Contact Persons associated with this Project:

Rhonda Loh	Botanist	US National Park Service; HAVO Research Center, Res Mng
Tim Tunison	Resource Management Division Head	US National Park Service; HAVO Research Center, RM admin office

Publications associated with this Project:

HAVO Project Review # 2003-041, Luhi Fire burned area rehab funding request, Tim Tunison, 2003

PARK : **HAVO**

Topic Vegetation Project Title Mauna Loa Rare Plants

First Year: 1992 End Year: 2000 Status Complete Proj Duration

Data Type/Location six systematic transects crossing the Mauna Loa Strip from the Powerline to the top of the Strip Road; the sections of Kipuka kulalio and Kipuka Maunaiu above 7000 ft fence were monitored with transects 100m apart.

Comments: This is not a current monitoring project, but could be revived

Data Collected Height, Width , condition and mortality of tagged individual plants was monitored in several populations

Proj Purpose Inventory of mauna Loa Rare plants above 7000 ft fence, systematic monitoring on two populations of the endangered Plantago hawaiensis and two populations of the threatened Silene hawaiiensis

Proj Usefulness historic trends of rare plants on Mauna Loa, population trends of 2 SOC's on Mauna Loa

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

rare etc.

vascular plants

Contact Persons associated with this Project:

Linda Pratt	Botanist	US Geological Survey; HAVO Research Center, Building 216
Thomas Belfield		US National Park Service; HAVO Research Center, Res Mng

Publications associated with this Project:

557901,Belfield&Pratt,2002

PARK : **HAVO**

Topic Vegetation Project Title Mauna Loa Strip Transects-Historic

First Year: 1984 End Year: 1993 Status Complete Proj Duration

Data Type/Location 6 belt transects at 1000m intervals , between 5000ft & Fenceline at 7000ft elev. (Mauna Loa "upper unit")Transects are of variable length, 10 m wide, Alien plant cover estimated with Braun-Blanquet scale in 10x10m segments

Comments:

Data Collected No data being collected currently

Proj Purpose Determine distribution and abundance of alien plants and rare native plants in Special Ecological Areas(SEAs)

Proj Usefulness Historic distribution and abundance of rare and alien plant species

Oranizations associated with this Project:

US Geological Survey

Theme Keywords associated with Project

rare etc.

vascular plants

weed distribution

Contact Persons associated with this Project:

Linda Pratt Botanist US Geological Survey; HAVO Research Center, Building 216

Publications associated with this Project:

PARK : **HAVO**

Topic Vegetation Project Title Mechanisms affecting succesional patterns after Puu Puai

First Year: End Year: Status Proj Duration

Data Type/Location

Comments: LISTED IN 2003 HAVO PROJECT REVIEWS- NEED TO CONTACT REBECCA

Data Collected

Proj Purpose UNKNOWN-LISTED AS APPROVED PROJECT IN 2003 HAVO PROJECT REVIEWS

Proj Usefulness

Oranizations associated with this Project:

Theme Keywords associated with Project

National Science Foundation

Contact Persons associated with this Project:

Rebecca Montgomery Professor-Tulane University

Publications associated with this Project:

PARK : **HAVO**

Topic | Project Title: NADP/NTN (Natioanl Atmospheric Deposition Program/ National Trends Network

First Year: | End Year: | Status | Proj Duration

Data Type/Location

Comments:

Data Collected: Trend Plots
Annual Data Summaries
Annual Data
data by calendar and water years
wet deposition totals
precipitation-weighted mean concentrations
Seasonal Data
wet deposition totals
precipitation-weighted mean concentrations
Monthly Data
precipitation-weighted mean concentrations
Weekly data
concentrations
Daily Data
daily precipitation dataWet(precipitation only) deposition data ia collected is collected in HAVO (site HI99) since 200-present

Proj Purpose

Proj Usefulness

Oranizations associated with this Project: | Theme Keywords associated with Project

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **HAVO**

Topic | Project Title: Naulu Lama Forest Project

First Year: | End Year: | Status | Proj Duration

Data Type/Location

Comments: We were unable to meet before the holidays, he will be available in January-ics

Data Collected: Measured rare tree and plants (dbh). Look at spread sheet to fill in the rest.

Proj Purpose

Proj Usefulness

Oranizations associated with this Project: | Theme Keywords associated with Project

US National Park Service

Contact Persons associated with this Project:

Thomas Belfield	US National Park Service; HAVO Research Center, Res Mng

Publications associated with this Project:

PARK : **HAVO**

Topic Fauna Project Title Nene (Hawaiian Goose) Monitoring program

First Year: End Year: Status Proj Duration

Data Type/Location

Comments:

Data Collected banding information, nesting info(location,cluth size, success), genetic info(blood samples),

Proj Purpose Population trend monitoring of Nene in Hawaii Volcanoes National Park

Proj Usefulness

Oranizations associated with this Project:	Theme Keywords associated with Project
US National Park Service	birds
Hawaii Department of Fisheries and Wildlife	
Slimbridge Wildfowl & Wetlands Trust	

Contact Persons associated with this Project:

Darcy Hu	Ecologist	US National Park Service
Howard Hoshide	Wildlife Biologist	US National Park Service
Kathleen Sherry	Biological Technician	US National Park Service
Paul Banko	Wildlife Biologist	US Geological Survey

Publications associated with this Project:

PARK : **HAVO**

Topic Landscape Project Title Overflight Noise Monitoring at Hawaii Volcanoes National Park

First Year: End Year: Status Proj Duration

Data Type/Location

Comments:

Data Collected

Proj Purpose More than 30,000 air tours, in helicopters or small planes, fly over Hawaii Volcanoes each year, giving the park one of the highest levels of overflights in the National Park System. In response to these intrusions to natural quiet and park wilderness areas, the National Park Service (NPS) and Federal Aviation Administration (FAA) are creating legal guidelines to help protect the experience of park visitors.

"We have some significant concerns about preserving the park's natural sounds," said Aleta Knight, management assistant at the park. "We want to make sure visitors can experience the natural soundscape, but without excluding visitors from having encounters in the park through alternative means," such as air tours. "It's about finding that balance."

The agencies' process of creating air tour guidelines follows the National Parks Air Tour Management Act of 2000, which sought to lessen "significant adverse impacts," such as excessive noise. Similar guidelines will eventually be set at more than 100 park sites, according to the FAA.

Sound levels have been measured at several areas inside the park since the fall.

Proj Usefulness

Oranizations associated with this Project:	Theme Keywords associated with Project
US National Park Service	soundscape
Federal Aviation Administration	

Contact Persons associated with this Project:

Aleta Knight	Management Assistant	US National Park Service

Publications associated with this Project:

2003-July-August, National Park Conservation Association Magazine, "Overflight Noise at Hawaii Volcanoes National Park

PARK : **HAVO**

Topic Vegetation Project Title Panau Iki Burn Revegetation project (565 ac)

First Year: End Year: 2008 Status In work Proj Duration planting 2003-2006 monitoring 2004-2008

Data Type/Location Plant establishemt efforts are to be concentrated in ~450 circular plots (15 m radius) established along transects that span the area.

Comments: Methodologies avery similar to those being used in KUPUKUPU burn area revegetation project, with exception of use of fire-sensitive species

Data Collected Monitoring of recovery in order to asess the success of the revegetation effort will take place at 20-50 vegetation plots inside and outside planting nodes. Outplant success, seedling recruitement of 4 fire tolerant sp. From direct seeding and overall vegetation recovery will be evaluated at 1,2, and 5 years following the burn.

Proj Purpose Monitor Efficacy of Restoration Efforts in Fire-damaged Area
Re-vegetate with native plants a 540 acre `ohi`a woodland/native shrubland damaged by a fire that began February 2003. Prevent establishment of aggressive non-native woody species.Approxcimately 10000 plants composed of >15 native species will be established by direct seeding and outplanting into ~450 plots along transects spanning the area. Control of Faya Tree, Strawberry Guava, and other aggressive non-native woody species by mechanical or chemical treatment will be used to prevent them from invading and dominating the post-burn environment.

Proj Usefulness Relative success of revegetation efforts in a burned area by direct seeding and outplanting.

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

fire effects
restoration
vascular plants
weed control

Contact Persons associated with this Project:

Kimberly Smith	Botanical Technician-Fire Effects	US National Park Service; HAVO Research Center, Res Mng
Rhonda Loh	Botanist	US National Park Service; HAVO Research Center, Res Mng
Thomas Belfield		US National Park Service; HAVO Research Center, Res Mng

Publications associated with this Project:

HAVO Project Review# 2003-029 Rehab 655 ac section of Panau Iki brun, R. loh, 2003

PARK : **HAVO**

Topic Terrestrial Invertebrates Project Title Picture-wing Drosophila monitoring

First Year: 1997 End Year: 1998 Status Complete Proj Duration

Data Type/Location Bait loop in Kipuka Puaulu, transects 19 & 2 in Olaa. Sponges put up every 50 m baited with mushroom & banana bait.

Comments:

Data Collected Counts done weekly May 1997-Jul 1998 in Kipuka Puaulu & Olaa. Picture-wings & exotics identified to species & counted, small endemic species counted as a group.

Proj Purpose Monitor Drosophila populations in wet & mesic forests. Compare numbers & community composition with older data from same areas.

Proj Usefulness Compare population numbers & structure to before introduction of yellowjackets. Document presence of rare & candidate endangered species.

Oranizations associated with this Project:

US Geological Survey

Theme Keywords associated with Project

invertebrates

Contact Persons associated with this Project:

David Foote	Ecologist	US Geological Survey

Publications associated with this Project:

PARK : **HAVO**

Topic Vegetation Project Title Pili prescribed burn experiments: Established vegetation

First Year: End Year: Status In work Proj Duration began 2000?, 10-15 yr project

Data Type/Location Remnant Pili grassland, base Holei Pali. Wildfire in 1992. Presc. Burns in 100x200m blocks. 3 burn treatments, 1 control. Burning treats.= one burn, every 2.5 yr, every 5 yr. over 10-15 yr period. 23 total blocks, focusing on 3 per treat.=12 blocks

Comments: original plans to monitor a larger number of treatment plots were scaled back due to lava, funding

Data Collected Established vegetation monitored:

Frequency, plant cover, grass density, shrub density, tree density - in 3 subsamples per treatment plot

Grass survivorship, shrub survivorship, tree survivorship- for 18 individuals per sp per treatment plot

Soil seedbank- 10 soil cores per treatment plot to be collected at 4-6 mo. Intervals

Invasive grass removal plots- removed all invasive grass sp within 10 4x4 m plots to test the response of native species with or without fire in the presence or absencce of invasive grass species

Proj Purpose Monitor recoverry of Pili grasssland in 3 different prescribed burning regimes

Determine if Pili grasslands can be maintained or expanded, and the presence of exotic species reduced throught the use of prescribed burns

Proj Usefulness Response of established vegetation to fire

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

fire effects
restoration
vascular plants
weed control

Contact Persons associated with this Project:

Kimberly Smith	Botanical Technician-Fire Effects	US National Park Service; HAVO Research Center, Res Mng
Rhonda Loh	Botanist	US National Park Service; HAVO Research Center, Res Mng

Publications associated with this Project:

Unofficial Pub, Pili prescribe burn experiments, rloh 2/02- HAVO research center, nursery files
HAVO Project Review#2001-029, Pili grassland prescribed burn experiments, R. Loh. 2001

PARK : **HAVO**

Topic Vegetation | Project Title Pili prescribed burn experiments: Fuels & Fire Severity

First Year: | End Year: | Status In work | Proj Duration began 2000?, 10-15 yr project

Data Type/Location Remnant Pili grassland, base Holei Pali. Wildfire in 1992. Presc. Burns in 100x200m blocks. 3 burn treatments, 1 control. Burning treats.: one burn, every 2.5 yr, every 5 yr. over 10-15 yr period. 23 total blocks, focusing on 3 per treat.=12 blocks

Comments: original plans to monitor a larger number of treatment plots were scaled back due to lava, funding

Data Collected Protocols according to 2001 Fire Monitoring Handbook
Dead & Down fuel load: sampled twigs, branches, stems and treee boles in and above litter alonga 30 foot random orientation planar transect; measures litter and duff depths every five feet in accordance with Brown's fuel transect guidelines(12? Subsamples Per tratment plot)

biomass: clipped, sorted, weighed 15 1x1 ft sample plots per treatment plot

burn severity ratings: rate & coded organic substrate and vegeattion impact along established cover transects immediately following the fire in 3 sub samples per plot.

Proj Purpose Determine if fuel loads decrease and fire severity of subsequent fires is reduced by periodic burning

Proj Usefulness impact of periodic burning on fuel loads and fire severity of subsequent fires

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

fire effects

vascular plants

Contact Persons associated with this Project:

Kimberly Smith	Botanical Technician-Fire Effects	US National Park Service; HAVO Research Center, Res Mng
Rhonda Loh	Botanist	US National Park Service; HAVO Research Center, Res Mng

Publications associated with this Project:

HAVO Project Review#2001-029, Pili grassland prescribed burn experiments, R. Loh. 2001

Unofficial Pub, Pili prescribe burn experiments, rloh 2/02- HAVO research center, nursery files

PARK : **HAVO**

Topic Vegetation Project Title Pili prescribed burn experiments:Seed addition experiments

First Year: End Year: Status In work Proj Duration began 2000?, 10-15 yr project

Data Type/Location Remnant Pili grassland, base Holei Pali. Wildfire in 1992. Presc. Burns in 100x200m blocks. 3 burn treatments, 1 control. Burning treats.: one burn, every 2.5 yr, every 5 yr. over 10-15 yr period. 23 total blocks, focusing on 3 per treat.=12 blocks

Comments: original plans to monitor a larger number of treatment plots were scaled back due to lava, funding

Data Collected In each of the 12 focal blocks discussed below there are 48 2x2m seed addition plots of the 48 :

1/2 are on rock tumulus, 1/2 are in grassy depressions
1/2 were seeded preburn, 1/2 were seeded postburn
16 were seeded with"seed cocktail a"
16 were seeded with "seed cocktail c"
16 were seeded with "seed cocktail e"

Each of the three seed cocktails contains a different mixture of 16 total species of Native & Non-Native Fire Tolerant and Fire Sensitive plants in on of three different mixes ("seed cocktails")

In each plot seed recruitment, was read at 1 yr, up to 5 of each species in each height class were read at 3-6 mo., % cover (braun-blaunqet) read at 1 yr postburn

Proj Purpose Test the response of selected lowland native species to frequent fires

Proj Usefulness efficacy of restoration efforts, recovery of native species exposed to and not exposed to fire. May help for planning restoration efforts in areas that are likely to burn

Oranizations associated with this Project:

Theme Keywords associated with Project

- fire effects
- restoration
- vascular plants

Contact Persons associated with this Project:

Kimberly Smith	Botanical Technician-Fire Effects	US National Park Service; HAVO Research Center, Res Mng
Rhonda Loh	Botanist	US National Park Service; HAVO Research Center, Res Mng

Publications associated with this Project:

- Unofficial Pub, Pili prescribe burn experiments, rloh 2/02- HAVO research center, nursery files
- HAVO Project Review #2002-007 Outplant /Seed native plants in Kealakomo Kipuka, Tunison 2002
- HAVO Project Review#2001-029, Pili grassland prescribed burn experiments, R. Loh. 2001

PARK : **HAVO**

Topic Vegetation Project Title Portulaca schlerocarpa monitoring

First Year: End Year: Status In work Proj Duration

Data Type/Location Surveys were done by initiative control (walking straight lines- no formal transects).

Comments: none

Data Collected Presence of Portulaca in this area. Surveys are complete. Outplantings are monitored for presence, live/dead.

Proj Purpose Locate and determine distribution of plants at Keanakakoi Crater

Proj Usefulness

Oranizations associated with this Project:	Theme Keywords associated with Project
US National Park Service	rare etc. vascular plants

Contact Persons associated with this Project:

Thomas Belfield		US National Park Service; HAVO Research Center, Res Mng
Tim Tunison	Resource Management Division Head	US National Park Service; HAVO Research Center, RM admin office
Linda Pratt	botanist	US Geological Survey; HAVO Research Center, Building 216

Publications associated with this Project:

HAVO Project Review# 2004-003, Augment critically endangered Portulaca sclerocarpa populations, Tunison & Belfield, 2003

PARK : **HAVO**

Topic Vegetation Project Title Portulaca sclerocarpa at Puhimau Hot Spot and Keanakakoi

First Year: 1984 End Year: 1994 Status Complete Proj Duration counts were made twice

Data Type/Location Grided out Puhimau hotspot in 10x10m plots using a baseline and markers at the edge of the hotspot. Individuals of the endangered species were counted

Comments: This is not a current monitoring project, but may be revived as part of Linda's planned limiting factors study

Data Collected none currently being collected

Proj Purpose Monitor population of endangered species Portulaca sclerocarpa

Proj Usefulness population trends/status of endangered species Portulaca sclerocarpa
planning management for the population

Oranizations associated with this Project:	Theme Keywords associated with Project
US Geological Survey	rare etc. vascular plants

Contact Persons associated with this Project:

Linda Pratt	Botanist	US Geological Survey; HAVO Research Center, Building 216

Publications associated with this Project:

PARK : **HAVO**

Topic Vegetation Project Title Rare plant monitoring at Kipuka Puaulu SEA

First Year: 1995 End Year: Status In work Proj Duration ongoing

Data Type/Location Surveys using initiative control to find new individuals. Associated outplanting monitoring is ongoing. This is done on a grid, instead of transects. Plants are located by grid coordinates.

Comments: Linda has a large database with this information. May also want to talk to her about this.

Data Collected Presence

Proj Purpose To monitor existing rare plant populations with a focus on Hibiscadelphus.

Proj Usefulness

Oranizations associated with this Project:	Theme Keywords associated with Project
US National Park Service	rare etc. vascular plants

Contact Persons associated with this Project:

Linda Pratt	Botanist	US Geological Survey; HAVO Research Center, Building 216
Thomas Belfield		US National Park Service; HAVO Research Center, Res Mng

Publications associated with this Project:

PARK : **HAVO**

Topic Vegetation Project Title Rare plant monitoring at Mauna Loa SEA

First Year: End Year: Status In work Proj Duration ongoing

Data Type/Location Plant surveyed by initiative control- taking note of those seen while walking through area.

Comments: We were unable to meet before the holidays, he will be available in January-ics

Data Collected Presence. Ongoing monitoring of outplantings (live/dead).

Proj Purpose To monitor rare plants at Mauna Loa SEA

Proj Usefulness

Oranizations associated with this Project:	Theme Keywords associated with Project
US National Park Service	rare etc. vascular plants

Contact Persons associated with this Project:

Linda Pratt	Botanist	US Geological Survey; HAVO Research Center, Building 216
Thomas Belfield		US National Park Service; HAVO Research Center, Res Mng

Publications associated with this Project:

Thomas Belfield and Linda Pratt. Rare Plants of the Mauna Loa Special Ecological Area, Hawaii Volcanoes National Park. PCSU Technical Report #130. October 2002.

PARK : **HAVO**

Topic Vegetation Project Title Rare plant monitoring at Olaa Tract

First Year: End Year: Status In work Proj Duration ongoing

Data Type/Location Survey of rare plants by initiative control (walking systematically- no permanent transects). Ongoing monitoring of outplanting.

Comments:

Data Collected Presence

Proj Purpose To monitor rare plants at Olaa Tract

Proj Usefulness

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

rare etc.
restoration
vascular plants

Contact Persons associated with this Project:

Thomas Belfield	US National Park Service; HAVO Research Center, Res Mng

Publications associated with this Project:

PARK : **HAVO**

Topic Vegetation Project Title Rare Plant stabalization in Mauna Loa SEA

First Year: 2001 End Year: Status In work Proj Duration To be ended in 2003-2004?

Data Type/Location two outplanting sites near 6000 ft elevation near the Mauna Loa Strip Road

Comments: this project added from a list of monitoring projects provided by LWP

Data Collected height, growth mortality of native plants to be measured at yearly intervals following outplanting

Proj Purpose Determine success of outplanting as restoration toll for rare plants in upper elevation/ subaplpine forest

Proj Usefulness efficacy of restoration efforts, success of outplanted individuals

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

rare etc.
restoration
vascular plants

Contact Persons associated with this Project:

Linda Pratt	Botanist	US Geological Survey; HAVO Research Center, Building 216
Thomas Belfield		US National Park Service; HAVO Research Center, Res Mng

Publications associated with this Project:

PARK : **HAVO**

Topic Vegetation Project Title Rare Plant stabalization in Kipuka Puaulu, Kipuka Ki

First Year: 2001 End Year: Status In work Proj Duration To be ended in 2003-2004?

Data Type/Location Out planting sites in Kipuka Puaulu, Kipuka Ki two sites near 6000 ft elevation near the Mauna Loa Strip Road

Comments: This project entered from a list of monitoring projects from Linda Pratt

Data Collected height, growth mortality of native plants to be measured at yearly intervals following outplanting

Proj Purpose Determine success of outplanting as restoration toll for rare plants in mesic forest

Proj Usefulness efficacy of restoration efforts, success of outplanted individuals

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

restoration

vascular plants

Contact Persons associated with this Project:

Linda Pratt	Botanist	US Geological Survey; HAVO Research Center, Building 216
Thomas Belfield		US National Park Service; HAVO Research Center, Res Mng

Publications associated with this Project:

PARK : **HAVO**

Topic Vegetation Project Title Rare Plants and Invertebrates Project

First Year: End Year: Status In work Proj Duration Tree growth work complete, focal plots not

Data Type/Location `Ola`a Koa Unit/Small Tract; Kipuka Ki, Kipuka Puaulu; transects and 25x50 plots, seedling/sapling subplots,leaf - litter trays, tree growth w/ dendrometer bands, 25-m radius stand structure plots around ind.found on tr.

Comments: tree growth work complete, focal plots not Species monitored include: Cyanea pilosa ssp loggipedunculata, Pritchardia beccriana, Trmatalobelia grandifolia, Charpenteria obovata, Pisonia brunoniana, Tetraplasandre oahuensis, Urera glabra

Data Collected Woody plant density and diameter; ground cover; seedlings and saplings counted and measured; phenology in plots and around uncommon species; growth of trees in plots or along transects measured with dendrometer bands. Stand structure of rare host plant species monitored
Plots sampled once only
Tree growth measured for 3.5 yrs,
Litter sampled for phenology patterns for 3.5 yrs
Rare plant stand structure remeasured after 2 to 4 years

Proj Purpose Monitor vegetation composition and structure in wet and mesic forests, Drosophilla host stand structure, tree growth ad phenology

Proj Usefulness status and changes in vegetation composition, Drosophilla host plant stand structure, reproduction
What is the status of host plants for rare invertebrates- is status changing?

Oranizations associated with this Project:

US Geological Survey

Theme Keywords associated with Project

invertebrates

rare etc.

vascular plants

Contact Persons associated with this Project:

Linda Pratt	Botanist	US Geological Survey; HAVO Research Center, Building 216

Publications associated with this Project:

PARK : **HAVO**

Topic Vegetation Project Title Rare plants of Kipuka Puaulu and Kipuka Ki

First Year: 1992 End Year: Status Complete Proj Duration selected species still revisited & informally monitored for seed prop.

Data Type/Location an existing rat smpling grid laid out in 25x25m blockes was expaneded to most of the deep ash portion of Kipuka Puaulu,Kipuka Ki was searched on parrallell transects at 25 m intervals.

Comments: Need to discuss project with Thomas to complete fields

Data Collected Individuals mapped, diameter and height measured

Proj Purpose Monitor individual rare plants in the two Kipukas,. 15 rare species initaly inventoried, monitored 1992-94. Selected rare species subsequently monitored by Thomas Belfield
These plants are now being revisited for seed propagation/ phenology, but not formally monitored

Proj Usefulness Location, growth of rare plants in Kipuka Ki and Puaulu

Oranizations associated with this Project:

US Geological Survey

US National Park Service

Theme Keywords associated with Project

rare etc.

vascular plants

Contact Persons associated with this Project:

Linda Pratt	Botanist	US Geological Survey; HAVO Research Center, Building 216
Thomas Belfield		US National Park Service; HAVO Research Center, Res Mng

Publications associated with this Project:

PARK : **HAVO**

Topic Vegetation Project Title Rare Plants of Managed Units of `Ola`a Forest

First Year: 1992 End Year: 1994 Status Complete Proj Duration

Data Type/Location Pu`u Unit, western part of New Unit, Ag Unit, Western half of Koa Unit, Small Tract: Systematic belt transects at 200-400m intervals

Comments: This is not a current monitoring project, but could be revived

Data Collected none currently being collected

Proj Purpose Inventory Rare plant populations in `Ola`a Tract

Proj Usefulness Historical populations of rare plants in `Ola`a tract. Could be compared with current populations to assess changes in vegetation due to feral pig control/ eradication.

Oranizations associated with this Project:

US Geological Survey

Theme Keywords associated with Project

feral ungulates

nonvascular plants

rare etc.

vascular plants

Contact Persons associated with this Project:

Linda Pratt	Botanist	US Geological Survey; HAVO Research Center, Building 216

Publications associated with this Project:

101053,Pratt&Abbott,1997

PARK : **HAVO**

Topic Vegetation Project Title Rare plants of Naulu Forest and Kealakomo

First Year: 1993 End Year: Status Complete Proj Duration past inventory, could be revived

Data Type/Location Accessible parts of the kipukas were searched on belt transects

Comments: This is not a current monitoring project, but could be revived

Data Collected none currently being collected rare plants mapped, diameter or height measured, cover of alien plant species estimated, select native plant species counted in size clases along tansects

Proj Purpose Sampled rare plants in 2 kipuka on Holei pali

Proj Usefulness This is NOT a current monitoring project, but a Inventory that Linda believes could be used as a baseline for examining rare plant mortality, stand structure and density changes as well as stand structure and density of the community dominant Diospyros sandwicensis

Oranizations associated with this Project:

US Geological Survey

Theme Keywords associated with Project

rare etc.

vascular plants

Contact Persons associated with this Project:

Linda Pratt	Botanist	US Geological Survey; HAVO Research Center, Building 216

Publications associated with this Project:

HAVO Project Review# 2001-029, Pili grassland prescribed burn experiments, R. Loh, 2001

101033, Abbott and Pratt, 1996

PARK : **HAVO**

Topic Vegetation Project Title Rare plants of the Lowlands

First Year: 1993 End Year: 2000 Status Complete Proj Duration

Data Type/Location Fimbrystylis plots at Kaena Point, Pu'u Loa; Sesbania tomentosa plants tagged and measured at seven population nodes and a subsample was monitored

Comments: This is not a current monitoring project, but could be revived

Data Collected none currently being collected. Subsample of Sesbania tomentosa tagged and measured to determine mortality, monitoring of the rare sedge Fimbristylis hawaiiensis in 2.5 m plots at two sites

Proj Purpose Survey area sknown to harbor rare plants in the coastal lowlands, and mid-elevation woodlands; monitor a subsample of Sesbania tomentosa to determine mortality, Monitor Fimbristylis hawaiiensis

Proj Usefulness Recent status of rare coastal lowland plant populations.

Oranizations associated with this Project:

US Geological Survey

Theme Keywords associated with Project

rare etc.

vascular plants

Contact Persons associated with this Project:

Linda Pratt	Botanist	US Geological Survey; HAVO Research Center, Building 216

Publications associated with this Project:

PARK : **HAVO**

Topic Vegetation Project Title Rehabilitation of Koa and Koa-`a`e forest on lower Mauna Loa-artificial seedbank

First Year: 2002 End Year: 2007 Status In work Proj Duration Some plots were started earlier, in 1998

Data Type/Location Plots at spur road, fenceline on Mauna Loa Strip road. Comparing "all at once" and "trickle" methods of establishing an artificial seed bank. In "trickle "treatment seed broadcast is spread out over a 2 year period.

Comments:

Data Collected reading seedling recruitment at all experimental sites at 6 mo intervals to 2 years from establishment, then will continue reading a subset at 6 mo. Intervals to 5 yr. point and willread the rest at 5 yrs.
Most plots established june 2002

Proj Purpose Monitor restoration efficacy, test new restoration methods. Researchers are attempting 2 methods for creating an "artificial seed back at selected sites targeted for restoration.

Proj Usefulness Planning management/ restoration strategies involving seed broadcast.

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

restoration

vascular plants

Contact Persons associated with this Project:

Rhonda Loh	Botanist	US National Park Service; HAVO Research Center, Res Mng
Sierra McDaniel	Nursery Manager?	US National Park Service; HAVO Research Center RM -Nursery office

Publications associated with this Project:

PARK : **HAVO**

Topic Vegetation Project Title Rehabilitation of Koa and Koa-`a`e forest on lower Mauna Loa-outplanting

First Year: 2002 End Year: 2007 Status In work Proj Duration Outplanting began some sites 1998

Data Type/Location 3 sites on Mauna loa (Soapberry bend(5 subsites), Fence line, Spur road) where grasses have been herbicided and outplanting has been initiated(outplanting initiated beginning in 1988-jan 2004). 1-4 treatment and control 20 x30 m FMH Plots in each site

Comments: See also seeding project

Data Collected 5 year FMH Plots: Cover, Frequency(species list), Tree density by height class for all sp, shrub density
Baseline plots established in March 2002, will be reread in 2007

Proj Purpose Restore koa montane dry forest, koa montane mesic forest, koa/`ohi`a/`a`e montane mesic forest
Monitor efficacy of restoration efforts- herbiciding of grasses and outplanting

Proj Usefulness vegetation community composition with and with out management, restoration success

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

restoration

vascular plants

Contact Persons associated with this Project:

Rhonda Loh	Botanist	US National Park Service; HAVO Research Center, Res Mng
Sierra McDaniel	Nursery Manager?	US National Park Service; HAVO Research Center RM -Nursery office

Publications associated with this Project:

PARK : **HAVO**

Topic Climate Project Title Remote Automated Weather Station (RAWS) Monitoring

First Year: 1973 End Year: Status In work Proj Duration on going

Data Type/Location Mauna Loa Station (RAWS)1979-present
HAVO Headquarters 1973- present
Hilina Pali (RAWS)-1973-present
Coastal (manual) 1980-1995, 1995-present (RAWS)

Comments:

Data Collected precipitation, relative humidity, temperature

Proj Purpose To monitor weather conditions daily in relationship to fire possibility conditions.

Proj Usefulness

Oranizations associated with this Project:	Theme Keywords associated with Project
US National Park Service	fire

Contact Persons associated with this Project:

Jack Menassian	Fire Manager	US National Park Service

Publications associated with this Project:

PARK : **HAVO**

Topic Vegetation Project Title Remote Monitoring of Invasive Plant Species-NEED TO SPEAK TO JIM JACOBI

First Year: End Year: Status Proj Duration

Data Type/Location

Comments: LISTED IN 2003 HAVO PROJECT REVIEWS

Data Collected

Proj Purpose

Proj Usefulness

Oranizations associated with this Project:	Theme Keywords associated with Project
US Geological Survey	vascular plants weed distribution

Contact Persons associated with this Project:

Jim Jacobi	US Geological Survey; HAVO Research Center, Building 344
Tracy Johnson	US Forest Service

Publications associated with this Project:

HAVO Project Review # 2003-037, Remote monitoring of invasive plant species, Johnson/Jacobi, 2003

PARK : **HAVO**

Topic Vegetation Project Title Roadside Weeds Survey

First Year: 2001 End Year: Status In work Proj Duration Dependent on availability of assistance for surveys

Data Type/Location Surveyors walk major roadsides on Hawaii Island. Both sides of the roadside are walked, as statistically significant differences are found in weed species on either side of the road.

Comments: Weed community assemblage on either side of the road has been found to have statistically significant differences.

Data Collected Survey of presence of weeds on major roadsides on Hawaii Island-Includes HAVO roads

Proj Purpose Survey of presence of weeds on major roadsides on Hawaii Island-Includes HAVO roads

Proj Usefulness Documents presence of weeds, incipient invaders in and near the park. May allow resource management to more rapidly address priority weeds. Frequency, new records, distribution of weeds.

Oranizations associated with this Project:

US Geological Survey

Theme Keywords associated with Project

vascular plants

weed distribution

Contact Persons associated with this Project:

Kealii Bio	Big Island Weed Project Specialist	US Geological Survey
Linda Pratt	Botanist	US Geological Survey; HAVO Research Center, Building 216

Publications associated with this Project:

Poster, 2003 Hawaii Conservation Conference- Kealii Bio

PARK : **HAVO**

Topic Vegetation Project Title SEA Localized Exotic plant control treatments

First Year: End Year: Status In work Proj Duration Varies , some indefinite

Data Type/Location Special Ecological Areas in the park,including: Ainahou, East Rift, Hilina Pali, Sulfur Banks, Kahue, Kamakaia Hills, Keanakakoi, Kipuka KI THIS IS AN INCOMPLETE LIST-SEE COMMENTS SECTION

Comments: need to finish reviewing files- ICS

Data Collected Name of SEA,species, #plants/area treated, treatment method
dates visited vary with species/ SEA

Proj Purpose Control of specific populations of invasives in Park Special Ecological Areas

Proj Usefulness Although the primary goal of this project is not monitoring, collected data on weed populations could be used for documentation of distributions, studies of control efficacy.

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

vascular plants

weed control

weed distribution

Contact Persons associated with this Project:

Bob Mattos	Pest control worker supervisor?	US National Park Service; HAVO Research Center, RM-Veg office
Chris Zimmer	Pest control worker supervisor	US National Park Service; HAVO Research Center, RM-Veg office
Jon Makaike		US National Park Service; HAVO Research Center, RM-Veg office
Rhonda Loh	Botanist	US National Park Service; HAVO Research Center, Res Mng

Publications associated with this Project:

PARK : **HAVO**

Topic Terrestrial Invertebrates Project Title SEA Megalagrion Survey

First Year: 1992 End Year: 1997 Status Complete Proj Duration

Data Type/Location Plants & holes counted along park transects in East Rift & Olaa Small Tract, Koa Unit, & Puu Unit. Also done at Kulani.

Comments:

Data Collected Data on counts of Astelia & Freycinetia plants (breeding sites for M. koelense) & water holes (breeding sites for other two), with obeservations of damselflies. First done in 1992, all resampled in 1993. Puu Unit transects resampled in 1994 & 1997.

Proj Purpose Establish distribution and abundance of three species of forest-breeding damselflies in HAVO: Megalagrion calliphya, M. hawaiiense, and M. koelense.

Proj Usefulness Establish distribution and potential breeding site abundance of native damselflies. Provide baseline for more intensive population monitoring, especially of M. koelense.

Oranizations associated with this Project:	Theme Keywords associated with Project
US Geological Survey	invertebrates

Contact Persons associated with this Project:

David Foote	Ecologist	US Geological Survey

Publications associated with this Project:

PARK : **HAVO**

Topic Vegetation Project Title SEA Weed monitoring

First Year: End Year: Status In work Proj Duration Varies depending on start- indefinite

Data Type/Location Transects in Park Special Ecological Areas including: Kipuka Ki, Keanakakoi, Olaa Lg Tract (not SEA), Puaulu, Mauna Loa SEA, Olaa Small Tract, Thurston SEA and othersTHIS IS AN INCOMPLETE LIST-SEE COMMENTS SECTION

Comments: Need to review these files in more depth- could probably be split up into multiple monitoring projects by SEA with more specific dates- ICS

Data Collected #s of individuals of priority weeds on transects throughout park SEA's

Proj Purpose Monitor populations of invasive species in Special Ecological Areas

Proj Usefulness population trends, change in species composition of invasive plants in Special Ecological Areas

Oranizations associated with this Project:	Theme Keywords associated with Project
US National Park Service	vascular plants
	weed distribution

Contact Persons associated with this Project:

Bob Mattos	Pest control worker supervisor?	US National Park Service; HAVO Research Center, RM-Veg office
Chris Zimmer	Pest control worker supervisor	US National Park Service; HAVO Research Center, RM-Veg office
David Benitez	Research Project Specialist	US National Park Service; HAVO Research Center, RM-Veg office
Rhonda Loh	Botanist	US National Park Service; HAVO Research Center, Res Mng

Publications associated with this Project:

Tunison, Tim. Alien and rare plan monitoring in small tract Olaa Special Ecological Area. 9 pages. No date.

Tunison, Tim. Monitoring alien plants in Thurston SEA. No date. 2 pages + map.

PARK : **HAVO**

Topic Geology Project Title Seismic Monitoring of Hawaiian Volcanoes

First Year: End Year: Status Proj Duration

Data Type/Location

Comments:

Data Collected

Proj Purpose Seismic monitoring of the active Hawaiian volcanoes began in 1912. Since then, the seismographic network operated and maintained by HVO has expanded to over 60 stations on the Big Island. Data from remote stations are continuously telemetered in real-time to HVO. HVO's network coverage is most dense on Kilauea (Parks: HAVO). A sparser network of stations covers Mauna Loa and the other active volcanoes, Lo`ihi and Hualalai (Parks: PUHE, PUHO, KAHO). The most complete historical, empirical data on location of earthquake epicenters with attributes information for date, depth and magnitude for the other islands might be available from the USGS National Earthquake Information Center (NEIC) (Parks: HALE, KALA).

Proj Usefulness

Oranizations associated with this Project:

Hawaiian Volcano Observatory

US National Park Service

Theme Keywords associated with Project

geology

Contact Persons associated with this Project:

Paul Okubo	Seismologist	Hawaiian Volcano Observatory

Publications associated with this Project:

PARK : **HAVO**

Topic Geology Project Title Seismicity

First Year: End Year: 2003 Status In work Proj Duration

Data Type/Location Various seismic stations on the islands of Hawai`i and Maui, national seismic networks (Advanced National Seismic System, USGS).

Comments: Paul Okubo (okubo@usgs.gov) monitoring also takes place globally by USGS, including AMME, NPSA, WAPA, HALE, PUKE, PUHO, USAR, ALKA, KAHO, and KALA (all PIN parks), this pretty much goes for all volcanic activity, the USGS' job in a braod sense os to monitor for such activity on all American lands and interests.

Data Collected Seismic data - constantly, records at HVO date back to 1700s

Proj Purpose Monitoring of seismic activity in Hawaii and elsewhere around the pacific, including the CNMI

Proj Usefulness

Oranizations associated with this Project:

US Geological Survey

Theme Keywords associated with Project

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **HAVO**

Topic Vegetation Project Title Silene hawaiiensis monitoring

First Year: End Year: Status Complete Proj Duration Started 2000?, likely to be restarted

Data Type/Location One population at 3 trees kipuka, one in a concertina (razor wire) fence area below 3 trees kipuka

Comments: This is not a current monitoring project, but LWp expressed revisiting these plots and restarting monitoring.

Data Collected None curently being collected. Was collected at 2 to 6 mo. Interval

Proj Purpose Monitoring of populations of Threatened Silene hawaiiensis on Mauna Loa with and without Feral ungulate control

Proj Usefulness Status of threatened plant populations inside HAVO, response of threatened plants to Feral Ungulate removal

Oranizations associated with this Project:

US Geological Survey

Theme Keywords associated with Project

feral ungulates

rare etc.

vascular plants

Contact Persons associated with this Project:

Linda Pratt	Botanist	US Geological Survey; HAVO Research Center, Building 216

Publications associated with this Project:

PARK : **HAVO**

Topic Vegetation Project Title Silversword direct seeding

First Year: 2004 End Year: Status Planned Proj Duration

Data Type/Location Mauna Loa upper unit near 7000 ft exclosure. 10 sites: direct seeding in small plots (1/2 in rock , 1/2 in adjacent shrub patches)

Comments:

Data Collected to be collected at 1 yr intervals

Proj Purpose Monitor seedling recruitement from direct seeding of silverswords

Proj Usefulness seeding success for restoration of Endangered Mauna Loa Silversword

Oranizations associated with this Project:

US National Park Service

US Geological Survey

Theme Keywords associated with Project

rare etc.

restoration

vascular plants

Contact Persons associated with this Project:

Linda Pratt	Botanist	US Geological Survey; HAVO Research Center, Building 216
Tim Tunison	Resource Management Division Head	US National Park Service; HAVO Research Center, RM admin office

Publications associated with this Project:

HAVO Project Review# 2003-035 Complete Reintroduction of Endangered Silversword, Tim Tunison , 2003

PARK : **HAVO**

Topic Vegetation Project Title Small Mammal Toxicant Project-Vegetation plots

First Year: End Year: 2003 Status Complete Proj Duration

Data Type/Location `Ola`a Koa unit-2 sites on transects 16, 18, Kipuka puaulu, Kipuka Ki- Randomly selected plots 12.5 x 25 m in each of the 4 sites

Comments:

Data Collected Monitored woody species density in measured diameter and height classes in plots Spring 2001?,Spring2003 also monitored outplanted native woody species(Hibiscadelppjus giffardianus &Clermontia hawaiiensis-monitored for ~3 yr)

Proj Purpose Monitor impacts of non-native rodents on native woody plants and vegetation

Proj Usefulness changes in woody plant species density in measured diameter and height classes in areas controlled for and not-controlled for non-native rodents.
What is the effect of rodent removal on woody plant species?

Oranizations associated with this Project:	Theme Keywords associated with Project
US Geological Survey	terrestrial mammals
	vascular plants

Contact Persons associated with this Project:

David Foote	Ecologist	US Geological Survey; HAVO Research Center, Building 216
Linda Pratt	Botanist	US Geological Survey; HAVO Research Center, Building 216

Publications associated with this Project:

PARK : **HAVO**

Topic Terrestrial Invertebrates Project Title Special Ecological Area soil survey

First Year: 1993 End Year: 1995 Status Complete Proj Duration

Data Type/Location Soil core & litter sample collected every 100 m in Olaa, every 50 m in ERZ, along established park transects.

Comments:

Data Collected Soil & litter samples collected from Olaa Small Tract & Koa Unit (Oct 1993), Olaa Puu Unit (Mar-Apr 1994),and East Rift Zone (Feb 1995).

Proj Purpose Evaluate soil microinvertebrate fauna in SEAs within HAVO.

Proj Usefulness Provides baseline data for soil mesofauna in SEAs.

Oranizations associated with this Project:	Theme Keywords associated with Project
US Geological Survey	invertebrates

Contact Persons associated with this Project:

David Foote	Ecologist	US Geological Survey

Publications associated with this Project:

PARK : **HAVO**

Topic Terrestrial Invertebrates Project Title The Infamous Chicken Project

First Year: 1995 End Year: 1995 Status Complete Proj Duration 2 months (Aug.-Sept.)

Data Type/Location Three pairs of plots, one pair each at Kipuka Ki, Hilina Pali Rd., and Kipuka Kahalii. 10 adults, 20 4-week old chicks, and 20 1-week old chicks at each plot in mongoose-resistant cages.

Comments:

Data Collected Each chicken weighed every day, flies present counted & identified. Maggots collected for rearing.

Proj Purpose Monitor decomposer fauna at dead chickens.

Proj Usefulness Provides a picture of the decomposer fauna attracted to dead birds along an elevational gradient.

Oranizations associated with this Project:	Theme Keywords associated with Project
US Geological Survey	invertebrates terrestrial mammals

Contact Persons associated with this Project:

David Foote	Ecologist	US Geological Survey

Publications associated with this Project:

PARK : **HAVO**

Topic Invasives Project Title Two-spotted leafhopper (Sophonia) population monitoring

First Year: 2001 End Year: Status In work Proj Duration

Data Type/Location Ten yellow sticky cards (whitefly traps) set out at each site near Vespula traps. Checked & replaced monthly.

Comments:

Data Collected sites (all with 10 traps, started Jan 2001 except Ainahou & Namakani Paio started Jun 2003)
Hilina Pali shelter
Muliwai Kipuka
Aloha Estates (outside park)
Kulanokuaiki Campground
Mauna Ulu flow
Volcano Transfer Station
Kipuka Ki
Kipuka Puaulu
Olaa Koa Unit & Small Tract
Keamoku
Kulani Boys Home (outside park)
Kulani Cone (outside park)
Namakani Paio
Ainahou Ranch

Proj Purpose Track long-term trends in leafhopper populations in both native and exotic-dominated vegetation types in and near the park.

Proj Usefulness Provides data on leafhopper populations throughout park over long term.

Oranizations associated with this Project:	Theme Keywords associated with Project
US Geological Survey	invertebrates

Contact Persons associated with this Project:

David Foote	Ecologist	US Geological Survey

Publications associated with this Project:

PARK : **HAVO**

Topic Vegetation Project Title Vegetation Recovery in the May 2002 Kupukupu Burn

First Year: End Year: Status In work Proj Duration 5 years from the end of the burn

Data Type/Location ~13000 fire tolerant plants direct seeded/outplanted in 250-300 plots (15m radius) . Fire sensitive spp.seeded/ planted in 3 sets of 3 plots(radii: 5m, 15m, 25m) to create stands less penetrable to fire. Annual removal of invasive woody sp.

Comments: SENSITIVE DATASET: PARK ONLY; Entered from proposed action statement provided by sierra mac daniels

Data Collected Outplant success, seedling recruitment from direct seeding and vegetation recovery will be evaluated at 20-50(HOW MANY?) vegetation plots inside and outside planting nodes at 1,2,5 years following the burn

Proj Purpose Monitor Efficacy of Restoration Efforts in Fire-damaged Area
1) establish fire-tolerant and fire-sensitive native plant associations in a 455 acre recently burned area that was formerly `ohi`a/swordfern.
2)develop methodoligies for establishing dense stands of fire-sensitive native species
3) control aggressive non-native woody species to prevent them from invading and dominating the post-fire environment

Proj Usefulness success of outplanted sp in a fire recovery area, efficacy of dense stands of fire sensitive sp. For protection from fire.

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

fire effects
restoration
vascular plants

Contact Persons associated with this Project:

Kimberly Smith	Botanical Technician-Fire Effects	US National Park Service; HAVO Research Center, Res Mng
Rhonda Loh	Botanist	US National Park Service; HAVO Research Center, Res Mng
Sierra McDaniel	Nursery Manager?	US National Park Service; HAVO Research Center RM -Nursery office

Publications associated with this Project:

HAVO Project Review#2002-030 Post-Fire revegetation, R. Loh , 2002
Unofficial Pub,Rehabilitate 455 ac of fire-damaged transitional mesic 'ohi'a/swordfern forest, 10/01/02- HAVO research center, nursery files

PARK : **HAVO**

Topic Invasives Project Title Vespula control project

First Year: 1996 End Year: 1997 Status Complete Proj Duration two Vespula seasons

Data Type/Location Traps roughly in two concentric circles. Bait set out for 2-5 days before being changed. KnoxOut mixed with canned chicken.

Comments:

Data Collected 40 poison bait set out at Kipuka Puaulu, Kipuka Ki used as control. Bait take, non-target insects in bait cups, and numbers of Vespula in monitoring traps recorded. Bait set out for 2-5 days before being changed. Monitoring with 40 non-lethal traps in each kipuka done throughout to track population changes.

Proj Purpose Evaluate the efficacy of poison baiting with KnoxOut 2FM (diazinon) to reduce Vespula numbers in isolated kipukas. Simultaneously evaluate impacts on non-target insects and potential benefits to native moths.

Proj Usefulness Demonstrate whether KnoxOut is useful for Vespula control, and develop methods that minimize impacts on native insects.

Oranizations associated with this Project:

US Geological Survey

Theme Keywords associated with Project

invertebrates

Contact Persons associated with this Project:

David Foote	Ecologist	US Geological Survey

Publications associated with this Project:

PARK : **HAVO**

Topic Terrestrial Invertebrates Project Title Vespula control project: Lepidoptera monitoring

First Year: 1996 End Year: 1997 Status Complete Proj Duration 9 months

Data Type/Location Sampling done two nights per month on the new moon. Truck with white boards mounted on it was driven to five stations in each kipuka, lights run for 15 minutes, moths counted, and moved to next site. Order of kipukas switched between nights.

Comments:

Data Collected Monthly counts May 1996-Feb 1997 in two kipukas, one with poison bait for Vespula set out and one as a control. Moths counted by morphotype on blacklight & fluorescent-illuminated boards.

Proj Purpose Monitor Lepidoptera numbers during and after Vespula control project. Poison bait set out in Kipuka Puaulu, Kipuka Ki used as control.

Proj Usefulness Shows response of different moth groups to Vespula control.

Oranizations associated with this Project:

US Geological Survey

Theme Keywords associated with Project

invertebrates

Contact Persons associated with this Project:

David Foote	Ecologist	US Geological Survey

Publications associated with this Project:

PARK : **HAVO**

Topic Landscape Project Title Viewshed Inventory and Assessment

First Year: End Year: Status Complete Proj Duration

Data Type/Location Crater Rim Drive Viewshed locations, Chain of Craters Road, Hilina Pali Road, Highway 11, Mauna Loa Road, Puu Huluhulu trail viewsheds, Sulphur Banks

Comments:

Data Collected Map location points using a Garmin GPS unit and photos were taken with a 35mm camera. This study was conducted during the months of May and June 2002.

Proj Purpose Due to natural processes of forest succession comprising the character of historic views, these historic views need to be managed to preserve visual access to historic scenic viewsheds.

Proj Usefulness

Oranizations associated with this Project:

Theme Keywords associated with Project

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **HAVO**

Topic | Project Title: Visitor Use Statistics at Hawaii Volcanoes National Park

First Year: | End Year: | Status | Proj Duration

Data Type/Location

Comments:

Data Collected: Total visits, recreational vehicles, non-recreational vehicles, bus vehicles, Namakani Paio tents, Kipuka Campground estimates, Volcano House use, Kilauea Military Camp use, Backcountry use- @ Halape, Kaaha, Keauhou, ML Summit cabin, Napau, Pepeiau cabin, Red Hill cabin.

vehicles, % change, YTD information is being collected and is available online Jan 1990 to present

Proj Purpose: Monitoring of visitor use within Hawaii Volcanoes National Park

Proj Usefulness

Oranizations associated with this Project:	Theme Keywords associated with Project
US National Park Service	visitor use

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **HAVO**

Topic: Geology | Project Title: Volcanic Activity Monitoring, Hawaii Volcanoes National Park

First Year: | End Year: | Status | Proj Duration: on-going

Data Type/Location

Comments:

Data Collected

Proj Purpose: Geologists at HVO track the advance of active lava flows using GPS mapping aids and aerial photographs. Observatory scientists keep detailed descriptions and photo archives, including still and video images, to better understand and forecast future eruptions (Parks: HAVO). Lava, spatter, and other erupted material are sampled for study of their geochemical and mineralogical composition (Parks: HAVO, HALE). Geodetic surveys are taken to precisely depict the growth of flow fields, vents and changes in ground deformation (Parks: HAVO, HALE, PUHO, PUHE, KAHO). In addition, they monitor the volcanoes through direct visual observations of eruptive activity, changes in electrical and magnetic properties, and changes in gravitational attraction (Parks: HAVO).

Proj Usefulness

Oranizations associated with this Project:	Theme Keywords associated with Project
Hawaiian Volcano Observatory	geology
US National Park Service	

Contact Persons associated with this Project:

Christina Heliker	Geologist	Hawaiian Volcano Observatory
Rick Hobblett	Geologist	Hawaiian Volcano Observatory

Publications associated with this Project:

PARK : **HAVO**

Topic Geology Project Title Volcanic Deformation

First Year: End Year: 2003 Status In work Proj Duration

Data Type/Location Various sites around the island of Hawai`i

Comments: Peter Cervellii (pcervelli@usgs.gov)

Data Collected Ongoing collection of data describing volcanic deformation, including:
1. GPS deformation
2. Tiltmeters
3. Borehole strainmeters

Proj Purpose Monitoring ground deformation resulting from volcanic activity

Proj Usefulness Useful both for understanding current and past activity of Hawaiian volcanoes, but for comparison to other volcanoes. Also useful for application of monitoring techniques to other places.

Oranizations associated with this Project: Theme Keywords associated with Project

US Geological Survey

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **HAVO**

Topic Geology Project Title Volcanic Gas Emissions

First Year: End Year: Status In work Proj Duration

Data Type/Location Usually collected from a vehicle or at/near the Pu`u O`o vent

Comments: Jeff Sutton (ajsutton@usgs.gov)

Data Collected Weekly (more often) data collected of air quality in HAVO via COSPEC (correlation spectrometry) measurements of volcanic plume emitted from Kilauea

Proj Purpose Monitoring volcanic gas emissions from Hawaiian volcanoes

Proj Usefulness Good way of monitoring flux of erupted lava over time, also useful in comparison to other volcanoes worldwide

Oranizations associated with this Project: Theme Keywords associated with Project

US Geological Survey

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **HAVO**

Topic Aquatic Biology (fresh) Project Title Wet forest damselfly breeding

First Year: 2003 End Year: 2003 Status In work Proj Duration Ongoing

Data Type/Location 14 traps placed about every 100 m (some closer or farther apart) on transects 4B & 5B in Olaa Puu Unit.

Comments:

Data Collected Collections started 16 Sep 2003. Emergence traps set over plastic water-filled containers collect damselflies and water-breeding flies which form their prey. Traps checked every week.

Proj Purpose Monitor damselfly (Megalagrion) breeding in artificial pools of varying age.

Proj Usefulness Evaluate quality of habitat for damselflies of various types of pools, including senescent litter-filled depressions and empty pools.

Oranizations associated with this Project:	Theme Keywords associated with Project
US Geological Survey	invertebrates

Contact Persons associated with this Project:

David Foote	Ecologist	US Geological Survey

Publications associated with this Project:

PARK : **HAVO**

Topic Invasives Project Title Yellowjacket (Vespula) population monitoring

First Year: 1997 End Year: 1997 Status Complete Proj Duration 12 months of monitoring

Data Type/Location Traps set up at Olaa Koa Unit & Small Tract, and at Keamoku flow on Mauna Loa Strip Rd. Traps also set up at Kulani (Kulani Cone & Boys Home areas).

Comments:

Data Collected Monthly counts of Vespula workers at heptyl butyrate-baited traps, Jan-Dec 1997.

Proj Purpose Track Vespula populations for use in correlating with prey surveys (e.g. Drosophila) and for use in control measures.

Proj Usefulness Provides tracking of Vespula populations through a year at several locations. Complements control data taken at Kipuka Ki & Puaulu.

Oranizations associated with this Project:	Theme Keywords associated with Project
US Geological Survey	invertebrates

Contact Persons associated with this Project:

David Foote	Ecologist	US Geological Survey

Publications associated with this Project:

PARK : **KAHO**

Topic Water Quality Project Title

First Year: End Year: Status Planned Proj Duration

Data Type/Location Grad student project?

Comments:

Data Collected

Proj Purpose Monitoring quantity & quality of groundwater.

Proj Usefulness

Oranizations associated with this Project:	Theme Keywords associated with Project
Massachusetts Institute of Technology	groundwater
US National Park Service	

Contact Persons associated with this Project:

Sheila Frankel	Professor, Civil & Envtl. Engineering	Mass. Institute of Technology

Publications associated with this Project:

PARK : **KAHO**

Topic Marine Project Title Coral reef monitoring

First Year: End Year: Status Planned Proj Duration

Data Type/Location

Comments:

Data Collected Will be starting surveys of % cover, baseline video monitoring of fish and algae, also water quality component.

Proj Purpose Monitor coral reef health.

Proj Usefulness

Oranizations associated with this Project:	Theme Keywords associated with Project
US National Park Service	coral reef
University of Hawaii - Manoa	nearshore

Contact Persons associated with this Project:

Celia Smith	Professor, Botany	University of Hawaii - Manoa
Cindy Hunter	Professor, Botany	University of Hawaii - Manoa

Publications associated with this Project:

PARK : **KAHO**

Topic Marine Project Title Green sea turtle population study

First Year: 1999 End Year: Status In work Proj Duration

Data Type/Location Radio tagging?

Comments:

Data Collected Growth, health, etc.

Proj Purpose Monitor health and numbers of green sea turtle population at KAHO.

Proj Usefulness

Oranizations associated with this Project:

- NOAA, National Marine Fisheries Service
- US National Park Service

Theme Keywords associated with Project

- coral reef
- nearshore
- reptile
- threatened/endangered species

Contact Persons associated with this Project:

George Balazs	Biologist	NOAA, National Marine Fisheries Service

Publications associated with this Project:

PARK : **KAHO**

Topic Water Quality Project Title Groundwater quality monitoring

First Year: End Year: Status Planned Proj Duration

Data Type/Location

Comments: I & M funded project.

Data Collected

Proj Purpose Look at groundwater quality inside the park. Upslope & surrounding development is a concern.

Proj Usefulness

Oranizations associated with this Project:

- US Geological Survey
- US National Park Service

Theme Keywords associated with Project

- groundwater

Contact Persons associated with this Project:

Gordon Tribble	WRD District Chief	US Geological Survey

Publications associated with this Project:

PARK : **KAHO**

Topic Marine Project Title Invasive algae control & monitoring

First Year: End Year: Status Planned Proj Duration

Data Type/Location

Comments:

Data Collected Success of eradication techniques, sites where alga is present.

Proj Purpose Eradication and monitoring of alien alga, Acanthophora spicifera, in Kaloko Fishpond. Monitoring of adjacent reef area.

Proj Usefulness Eradication techniques.

Oranizations associated with this Project:

- US National Park Service
- University of Hawaii - Manoa

Theme Keywords associated with Project

- alien species
- coral reef
- cultural

Contact Persons associated with this Project:

Celia Smith	Professor, Botany	University of Hawaii - Manoa
Cindy Hunter	Professor, Botany	University of Hawaii - Manoa
Sallie Beavers		US National Park Service

Publications associated with this Project:

PARK : **KAHO**

Topic Terrestrial Invertebrates Project Title Kona Small Park Insect Survey

First Year: 1992 End Year: 1992 Status Complete Proj Duration

Data Type/Location

Comments:

Data Collected All insect taxa surveyed in 1992. Additional records added from sporadic, less intensive surveys 1993-1998.

Proj Purpose Assess insect fauna of the three small NHPs on the Kona coast of Hawaii.

Proj Usefulness Baseline distribution data for native and exotic insect species in coastal Kona.

Oranizations associated with this Project:

- US Geological Survey

Theme Keywords associated with Project

- invertebrates

Contact Persons associated with this Project:

David Foote	Ecologist	US Geological Survey

Publications associated with this Project:

PARK : **KAHO**

Topic Vegetation Project Title Native plant outplantings and monitoring

First Year: End Year: Status In work Proj Duration

Data Type/Location

Comments:

Data Collected Success of alien plant control methods, health of outplanted native plants.

Proj Purpose Monitor success of alien vegetation clearing and native plant outplantings.

Proj Usefulness Techniques for alien plant removal.

Oranizations associated with this Project:

US National Park Service

Tropical reforestation ecology experiment?

Kealakehe High School

Theme Keywords associated with Project

alien species

vascular plants

Contact Persons associated with this Project:

Stan Bond	Resource Manager, KAHO	US National Park Service

Publications associated with this Project:

PARK : **KAHO**

Topic Fauna Project Title Native waterbird status

First Year: End Year: Status In work Proj Duration

Data Type/Location Monthly or so data collection?

Comments:

Data Collected Counts of native, alien & migratory species.

Proj Purpose Monitor waterbird populations & nesting & fledging success.

Proj Usefulness

Oranizations associated with this Project:

Ducks Unlimited

US National Park Service

Theme Keywords associated with Project

birds

threatened/endangered species

Contact Persons associated with this Project:

Scott Waddington	?	Ducks Unlimited

Publications associated with this Project:

PARK : **KAHO**

Topic Water Quality Project Title Nutrient flux in groundwater

First Year: End Year: Status Planned Proj Duration

Data Type/Location Primarily `Aimakapa Pond, also Kaloko Pond, anchialine pools, and wells both inside and outside park.

Comments:

Data Collected

Proj Purpose Look at groundwater quality in park.

Proj Usefulness

Oranizations associated with this Project:	Theme Keywords associated with Project
University of Hawaii - Manoa	groundwater
US National Park Service	

Contact Persons associated with this Project:

Ed Laws	Professor, Oceanography	University of Hawaii - Manoa

Publications associated with this Project:

PARK : **KAHO**

Topic Fauna Project Title Predator control monitoring

First Year: End Year: Status In work Proj Duration

Data Type/Location

Comments:

Data Collected Log number of animals trapped, as well as amount of bait supplied to bait stations.

Proj Purpose Monitor results of predator control.

Proj Usefulness

Oranizations associated with this Project:	Theme Keywords associated with Project
US National Park Service	alien species
	terrestrial mammals

Contact Persons associated with this Project:

Stan Bond	Resource Manager, KAHO	US National Park Service

Publications associated with this Project:

PARK : **KAHO**

Topic Marine Project Title Proposed USGS studies on Pacific Coral Habitats

First Year: End Year: Status Proj Duration

Data Type/Location REMOTE SENSING: air photo, 1:10,000. FIELD MAPPING: towed camera sys (RSC), digital video, & ground truth to produce interactive maps of coral habitats. PROCESS: conduct for full year, including studies such as: sediment flux, turbidity, pollutant pathways, surface flow directions.

Comments: I found this proposal in the orange/red expandable file on Melia-Lane Kamahele desk in her KONA parks GIS folder. Project would apply to all Kona coast parks - KAHO, PUHO, PUHE, ALKA.

Data Collected Remote sensing at all National Parks
Field Mapping at most National Parks
Process studies at selected National Parks

Proj Purpose "To learn more about location and distribution of corals in the environs of Pacific National Parks and about the processes that influence their health and sustainability."

Proj Usefulness

Oranizations associated with this Project:

- US Geological Survey
- US National Park Service

Theme Keywords associated with Project

- bathymetry
- coral reef
- erosion
- GIS
- mapping
- remote sensing

Contact Persons associated with this Project:

Michael Field		USGS, Pacific Science Center

Publications associated with this Project:

PARK : **KAHO**

Topic Marine Project Title Sea turtle forage study

First Year: End Year: Status In work Proj Duration

Data Type/Location

Comments:

Data Collected Turtle poop.

Proj Purpose See what green sea turtles are eating.

Proj Usefulness

Oranizations associated with this Project:

- University of Hawaii - Hilo
- US National Park Service

Theme Keywords associated with Project

- coral reef
- reptile
- threatened/endangered species

Contact Persons associated with this Project:

Karla McDermid	Professor, Marine Science	University of Hawaii - Hilo

Publications associated with this Project:

PARK : **KAHO**

Topic Fauna Project Title Shorebird surveys

First Year: End Year: Status In work Proj Duration

Data Type/Location

Comments:

Data Collected Species present, numbers, location.

Proj Purpose Shorebird surveys taken by field assistants. Would like to start up again.

Proj Usefulness

Oranizations associated with this Project:	Theme Keywords associated with Project
US National Park Service	birds

Contact Persons associated with this Project:

Sallie Beavers	US National Park Service

Publications associated with this Project:

PARK : **KAHO**

Topic Water Quality Project Title Submarine groundwater

First Year: 2005 End Year: Status Planned Proj Duration

Data Type/Location

Comments:

Data Collected

Proj Purpose Locate & measure submarine groundwater discharge. Use isotopes to trace sources of nutrients.

Proj Usefulness

Oranizations associated with this Project:	Theme Keywords associated with Project
Stanford University	groundwater
US National Park Service	nearshore

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **KAHO**

Topic Marine Project Title West Hawai`i Aquarium Project (WHAP)

First Year: 1999 End Year: Status In work Proj Duration on-going

Data Type/Location Surveys began in March 1999 and are conducted on a bimonthly basis. All fish in four 100m^2 are counted.

Comments:

Data Collected Distribution and abundance of aquarium fishes in 23 sites since 1998 along west Hawai'I coastline in and adjacent to proposed FRAs.

Proj Purpose 1) Estimate impacts of aquarium fish collecting in West Hawaii
2) Evaluate effectiveness of the FRA plan to increase aquarium fisheries
3) Estimate critical habitat characteristics for adult and juvenile aquarium fishes
4) Document recruitment patterns of aquarium fishes

Proj Usefulness

Oranizations associated with this Project:

Washington State University, Vancouver
Hawai'I Division of Aquatic Resources
University of Hawaii - Hilo

Theme Keywords associated with Project

biological
fish

Contact Persons associated with this Project:

Brian Tissot	Washington State University, Vancouver
Leon Hallacher	University of Hawaii - Hilo
William Walsh	Hawai'I Division of Aquatic Resources

Publications associated with this Project:

PARK : **KALA**

Topic Vegetation Project Title ASK RICK WARSHAUER ABOUT VEG MONITORING PROJECTS

First Year: End Year: Status Proj Duration

Data Type/Location

Comments: Unable to meet before the holidays- Guy Hughes mentioned that Rick has some planned/ ongoing projects for KALA

Data Collected

Proj Purpose

Proj Usefulness

Oranizations associated with this Project:

US Geological Survey

Theme Keywords associated with Project

rare etc.
vascular plants

Contact Persons associated with this Project:

Rick Warshauer	Botanist	US Geological Survey; HAVO Research Center, Building 344

Publications associated with this Project:

PARK : **KALA**

Topic Terrestrial Invertebrates Project Title Astelia invertebrate monitoring

First Year: 2002 End Year: Status In work Proj Duration

Data Type/Location Counts done along pig survey transects in Hanalilolilo and Puu Kolekole, Kamakou.

Comments:

Data Collected Apr 2002-present: Monthly counts of invertebrates found in Astelia rosettes on two transects in Kamakou Preserve.

Proj Purpose Monitor inverts found in Astelia rosettes due to their role as prey for naiads of Megalagrion koelense.

Proj Usefulness Document prey availability for naiads of M. koelense.

Oranizations associated with this Project:	Theme Keywords associated with Project
US Geological Survey	invertebrates

Contact Persons associated with this Project:

David Foote	Ecologist	US Geological Survey

Publications associated with this Project:

PARK : **KALA**

Topic Fauna Project Title Bird disease infection rate survey

First Year: End Year: 2003 Status Complete Proj Duration

Data Type/Location

Comments: Near Puu Alii

Data Collected Single trips to each site (Kipahulu valley, Molokai wet forest, NPSA) for 5-10 days. Mosquito traps and mist nets used to sample mosquitoes and birds. Larval surveys in pools also performed.

Proj Purpose Assess infection rates of avian malaria in wet forests.

Proj Usefulness Baseline data for monitoring

Oranizations associated with this Project:	Theme Keywords associated with Project
US Geological Survey	birds invertebrates

Contact Persons associated with this Project:

Carter Atkinson	US Geological Survey
Dennis LaPointe	US Geological Survey

Publications associated with this Project:

PARK : **KALA**

Topic Vegetation Project Title Centarium sebaiodes, Tetramalopium transects

First Year: End Year: Status Complete Proj Duration

Data Type/Location

Comments:

Data Collected None being collected at this time

Proj Purpose Transects set up by Jeff Trainer in 1998-1999 to monitor species of concern, Guy expresed interest in revisiting these at a later date

Proj Usefulness

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

rare etc.

vascular plants

Contact Persons associated with this Project:

Guy Hughes	Resource Manager?	US National Park Service

Publications associated with this Project:

PARK : **KALA**

Topic Project Title Classification scheme for benthic habitats: Main eight Hawaiian Islands

First Year: End Year: Status Proj Duration

Data Type/Location

Comments:

Data Collected

Proj Purpose

Proj Usefulness

Oranizations associated with this Project:

NOAA, National Ocean Service, Biogeography Team

Analytical Laboratories of Hawaii

University of Hawaii at Manoa, Hawaii Institute of Marine Biology

Theme Keywords associated with Project

Contact Persons associated with this Project:

M. Anderson		Analytical Laboratories of Hawaii
Mark E. Monaco	Marine Biologist	NOAA, National Ocean Service, Biogeography Team
Michael S. Coyne	Marine Biologist	NOAA, National Ocean Service, Biogeography Team
Paul Jokiel		University of Hawaii at Manoa, Hawaii Institute of Marine Biology

Publications associated with this Project:

PARK : **KALA**

Topic | Project Title: General Weed removal Data

First Year: | End Year: | Status | Proj Duration

Data Type/Location

Comments: This is not a true monitoring project but historical GPS data on locations of exotic plant populations that may be followed up with monitoring of those areas

Data Collected: removal #s, acreage treated

Proj Purpose: Removal of exotic weeds from Kauhako crater anfd coastal areas

Proj Usefulness

Oranizations associated with this Project:

US National Park Service

National Park Service -Exotic Plant Management Team

Theme Keywords associated with Project

Contact Persons associated with this Project:

Guy Hughes	Resource Manager?	US National Park Service
Jeremy Gooding	Team Coordinator	National Park Service -Exotic Plant Management Team

Publications associated with this Project:

PARK : **KALA**

Topic: Terrestrial Invertebrates | Project Title: Low Density Pig Project

First Year: 1996 | End Year: 1996 | Status: In work | Proj Duration

Data Type/Location: Carried out in Kamakou Preserve at Hanalilolilo and Puu Kolekole. Two pairs of 30x30 m plots set up, one fenced, with 5 m buffer and 2 20 m transects. Samples taken every 1 m. Soil samples put in Berlese funnels.

Comments:

Data Collected: Feb 1996 - soil/litter (alternate stations collected 3 weeks apart), pitfalls, pans
May/June 1996 - same as Feb (no pans from Hanalilolilo)
Oct/Nov 1996 - soil/litter
Inverts sorted to order, Collembola to species.

Proj Purpose: Comparing soil fauna at wet forest sites with low densities of pigs with plots from which pigs have been excluded to see if complete eradication of pigs is necessary for forest recovery. Part of a large program also looking at nutrients and flora. Later expanded to Olaa Puu Unit in HAVO

Proj Usefulness: Indicates whether, for soil mesofauna, total exclusion of pigs is necessary or if keeping population at low levels by hunting is sufficient to remove impacts.

Oranizations associated with this Project:

US Geological Survey

Theme Keywords associated with Project

invertebrates

Contact Persons associated with this Project:

David Foote	Ecologist	US Geological Survey

Publications associated with this Project:

PARK : **KALA**

Topic | Project Title: Monitoring coral health spectrally in the Pacific Islands US National Parks

First Year: | End Year: | Status | Proj Duration

Data Type/Location

Comments:

Data Collected

Proj Purpose: "...To develop spectral monitoring methods to determine the health of corals located in US Pacific Islands National Parks. The spectral properties of corals under stress conditions associated with bleaching and disease will be identified and characterized for development of a coral health spectral database."

Proj Usefulness

Oranizations associated with this Project:

University of Hawai'i, School of Ocean and Earth Sciences and Technology, Department of Oceanography

University of Hawaii at Manoa, Hawaii Institute of Marine Biology

Theme Keywords associated with Project

Contact Persons associated with this Project:

Amy M. Apprill	University of Hawai'i, School of Ocean and Earth Sciences and Technology, Department of Oceanography
Eric J. Hochberg	University of Hawaii at Manoa, Hawaii Institute of Marine Biology
Marlin J. Atkinson	University of Hawaii at Manoa, Hawaii Institute of Marine Biology

Publications associated with this Project:

PARK : **KALA**

Topic: Vegetation | Project Title: Outplanting Monitoring

First Year: | End Year: | Status: Planned | Proj Duration

Data Type/Location: 26 "building block " tree sp, 8 herbaceous " building block " sp, ~30 locally rare and T&E sp. Are currently in propagation. Sites for outplanting are being choosen in kukaiwa`a, Wailea, near shore islets, coastal strand area, and Kauhako crater

Comments:

Data Collected: IN PLANNING- plants have not yet been outplanted
Database has been created to monitor by, site, by plant crown cover of woody sp, cover of herbaceous sp.

Proj Purpose: monitor success of outplanted individuals in restoration areas

Proj Usefulness: success of restoration efforts

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

rare etc.

restoration

vascular plants

Contact Persons associated with this Project:

Guy Hughes	Resource Manager?	US National Park Service

Publications associated with this Project:

PARK : **KALA**

Topic Vegetation Project Title Puu Alii field inventory

First Year: 1989 End Year: 1989 Status Complete Proj Duration 1 day on ground

Data Type/Location Survey crews spent 1 field days gathering data along a transect situated along a ridge between the reserve and neighboring Wailau Valley, thought to be a possible access point for ungulates into the reserve. Field forms were filled out every 50 m.

Comments:

Data Collected March 1989: vegetation community and presence of rare plants, native birds, feral ungulates, and nonnative plants. Mostly aerial reconnaissance, with only one field day spent gathering data along a single transect

Proj Purpose Field inventory conducted to gather information for management plan

Proj Usefulness Provides baseline information for future surveys & monitoring of Olokui.

Oranizations associated with this Project:	Theme Keywords associated with Project
Hawaii Department of Fisheries and Wildlife	biological

Contact Persons associated with this Project:

Betsy Gagne	NARS coordinator	Hawaii Department of Fisheries and Wildlife

Publications associated with this Project:

PARK : **KALA**

Topic Vegetation Project Title Puu Alii field inventory

First Year: 1989 End Year: 1989 Status Complete Proj Duration 9 days on ground

Data Type/Location Survey crews spent 9 field days gathering data along 8 transects. Transects were planned to sample the variety of vegetation types. Field forms were filled out every 50 m.

Comments:

Data Collected January 1989: vegetation community and presence of rare plants, native birds, feral ungulates, and nonnative plants.

Proj Purpose Gather management-oriented resource information over a large area in a short time period. It was not intended to be a comprehensive biological inventory. Sampling of small mammals, birds, and invertebrates was incidental rather than systematic.

Proj Usefulness Provides baseline information for future surveys & monitoring of Puu Alii.

Oranizations associated with this Project:	Theme Keywords associated with Project
Hawaii Department of Fisheries and Wildlife	biological

Contact Persons associated with this Project:

Betsy Gagne	NARS coordinator	Hawaii Department of Fisheries and Wildlife

Publications associated with this Project:

PARK : **KALA**

Topic Vegetation Project Title Rare plant inventory with Ken wood and follow up monitoring plots

First Year: 2003 End Year: Status In work Proj Duration inventory in work, monitoring plots planned

Data Type/Location 3 drainages in KALA : Kalawao,makalanua,kalaupapa;
Planned plot work for rare locations will include: circular plots of vasying sizes around rare plant populations, mapping & crown cover of woody species

Comments:

Data Collected Compiling species lists by drainage.Location , threat assesmentfor rare plants

Proj Purpose CURRENT:Inventory of plants in the park by drainage. Location, threat assesment for rare plants
IN PLANNING: monitor community around specific populations of rare plants

Proj Usefulness Species lists by drainage, monitoring woill provide information on status of plant community assemblage around populations of rare plants, may help to identify management priorities for these populations

Oranizations associated with this Project:

US National Park Service

National Tropical Botanical Garden

Theme Keywords associated with Project

rare etc.

vascular plants

watersheds

Contact Persons associated with this Project:

Guy Hughes	Resource Manager?	US National Park Service

Publications associated with this Project:

PARK : **KALA**

Topic Vegetation Project Title Rare plant stabalization Project

First Year: End Year: Status Planned Proj Duration

Data Type/Location

Comments:

Data Collected IN PLANNING

Proj Purpose Stabalize Populations aof 8 rare/T& E species

Proj Usefulness

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

rare etc.

restoration

vascular plants

Contact Persons associated with this Project:

Guy Hughes	Resource Manager?	US National Park Service

Publications associated with this Project:

PARK : **KALA**

Topic Vegetation Project Title Vegetation Mapping Kalawao county for Kaulapapa NHP

First Year: End Year: Status Planned Proj Duration

Data Type/Location Kalawao

Comments: Rick Warshauer to help with this

Data Collected Contract for imagery has been paid for, no imagery yet. Plot work and ground truthing planned

Proj Purpose Create current maps of vegetation of Kaualapapa national Historic Park

Proj Usefulness will provide vegetation maps of the park that can be compared with historic maps(eg. Evangiline funk maps?),or future maps to detect changs in vegetation

Oranizations associated with this Project:	Theme Keywords associated with Project
US National Park Service	vascular plants

Contact Persons associated with this Project:

Guy Hughes	Resource Manager?	US National Park Service

Publications associated with this Project:

PARK : **KALA**

Topic Vegetation Project Title Vegetation Recovery following ungulate removal

First Year: End Year: Status Planned Proj Duration

Data Type/Location None set up- still in intial planning stage

Comments: Guy feels this to be a major research need at KALA, but implementation is funding/staff dependent

Data Collected In planning: Would like to set up plots in ungulate/ungulate free areas and monitor
Initially will probably set up GPS photopoints to record qualatative changes

Proj Purpose Monitorchanges in plant community following removal of feral ungulates

Proj Usefulness

Oranizations associated with this Project:	Theme Keywords associated with Project
US National Park Service	feral ungulates nonvascular plants vascular plants

Contact Persons associated with this Project:

Guy Hughes	Resource Manager?	US National Park Service

Publications associated with this Project:

PARK : **KALA**

Topic Vegetation Project Title Weed removal monitoring at Kukaiwaa

First Year: 2003 End Year: Status In work Proj Duration 6-8 month intervals

Data Type/Location Java Plum removal area at Kukaiwa`a

Comments:

Data Collected # of individuals in plots?(or transects-check with guy) at 6-8 mo. Intervals following initial removal

Proj Purpose Monitor efficacy of weed removal in site being prepared for outplanting/restoration

Proj Usefulness Treatment efficacy of java plum removal efforts

Oranizations associated with this Project:	Theme Keywords associated with Project
US National Park Service	vascular plants weed control

Contact Persons associated with this Project:

Guy Hughes	Resource Manager?	US National Park Service

Publications associated with this Project:

PARK : **NPSA**

Topic Water Quality Project Title ASEPA Stream Water Quality Monitoring Program - Study#: NPSA-00211

First Year: 2003 End Year: 2004 Status In work Proj Duration monthly counts since May 2003

Data Type/Location Samples taken from Fagatuitui Stream (the eastern most stream draining into Fagatuitui Cove) and Amalau Stream (east of Vatia).

Comments: Permit#: NPSA-2003-SCI-0004.

Data Collected Monthly specimen collections for field measurement and analysis. Some animals may be preserved for later analysis or identification. Organisms collected include: mountain bass (Kuhlia sp.), shrimp (Macrobranchium sp. Atya sp.), shrimp (Neritina sp.), and crane flies (Genus Diperta).

Proj Purpose Examine water quality for streams on Tutuila.

Proj Usefulness Identifies the pollutants causing water quality impairments and the sources of those pollutants.

Oranizations associated with this Project:	Theme Keywords associated with Project
American Samoa Environmental Protection Agency	streams water quality watersheds

Contact Persons associated with this Project:

Guy DiDonato	Research Scientist	American Samoa Environmental Protection Agency

Publications associated with this Project:

As of Nov. 24, 2003 on desktop version of NatureBib. ASEPA Stream Water Quality Monitoring Plan. March 2003.

PARK : **NPSA**

Topic Fauna Project Title Bat Studies - Population Monitoring

First Year: 1986 End Year: Status In work Proj Duration

Data Type/Location Monthly counts are conducted at station sites. Quarterly counts are conducted at roosts to determine colony size , either by boat circumnavigating the island or through counts of bats emerging from roosts (exit counts).

Comments:

Data Collected Monthly point counts of Pteropus samoensis at 7 sites on Tutuila, one of which is within the Park at Amalau Valley. Pteropus tonganus counts are conducted at roosts.

Proj Purpose To generate indices of abundance used both to track temporal changes.

Proj Usefulness Useful information for comparing patterns in numbers among sites.

Oranizations associated with this Project:

Am Samoa Department of Marine and Wildlife Resources

Theme Keywords associated with Project

bats

Contact Persons associated with this Project:

Joshua Seamon	Biologist (Bats)	Am Samoa Department of Marine and Wildlife Resources
Ruth Utzurrum	Biologist (Birds)	Am Samoa Department of Marine and Wildlife Resources

Publications associated with this Project:

Population status and behaviors of the Samoan flying fox (Pteropus samoensis) on Tutuila Island, American Samoa. Brooke, Anne. 2001.

PARK : **NPSA**

Topic Water Quality Project Title Beach Water Monitoring Program

First Year: 2001 End Year: Status In work Proj Duration weekly samples taken since 2001

Data Type/Location Samples are analyzed for Enterococci and measurements of turbidity, conductivity, chlorophyll a, pH, temperature, salinity and dissolved oxygen are collected.

Comments:

Data Collected Highly popular beach waters are sampled on a weekly basis. Less popular beach waters are sampled on a monthly or quarterly basis.

Proj Purpose Recreational beach water monitoring to determine if beach is safe for swimming.

Proj Usefulness Samples are not taken within the park boundaries, but the results of the analyzed water are important information for territory.

Oranizations associated with this Project:

American Samoa Environmental Protection Agency

Theme Keywords associated with Project

nearshore

water quality

Contact Persons associated with this Project:

Guy DiDonato	Research Scientist	American Samoa Environmental Protection Agency

Publications associated with this Project:

PARK : **NPSA**

Topic Fauna Project Title Bird disease infection rate survey

First Year: End Year: 2003 Status Complete Proj Duration

Data Type/Location

Comments:

Data Collected Single trips to each site (Kipahulu valley, Molokai wet forest, NPSA) for 5-10 days. Mosquito traps and mist nets used to sample mosquitoes and birds. Larval surveys in pools also performed.

Proj Purpose Assess infection rates of avian malaria in wet forests.

Proj Usefulness Baseline data for monitoring

Oranizations associated with this Project:	Theme Keywords associated with Project
US Geological Survey	birds
	invertebrates

Contact Persons associated with this Project:

Carter Atkinson	US Geological Survey
Dennis LaPointe	US Geological Survey

Publications associated with this Project:

PARK : **NPSA**

Topic Fauna Project Title Bird Studies - Population Monitoring

First Year: 1991 End Year: Status In work Proj Duration monthly counts since 1997, quarterly counts since 2001

Data Type/Location 7 transects on Tutuila (2 in Park). Variable Circular Plot method at various survey stations. Stations are at approx. 150 m intervals. In 1998, 6 transects were established in Manu'a (2 in Park). Olosega, 2 transects are in the propsosed park area.

Comments:

Data Collected Formerly monthly surveys but currently quarterly surveys on type of birds seen and heard.

Proj Purpose Population monitoring of birds.

Proj Usefulness

Oranizations associated with this Project:	Theme Keywords associated with Project
Am Samoa Department of Marine and Wildlife Resources	birds

Contact Persons associated with this Project:

Joshua Seamon	Biologist (Bats)	Am Samoa Department of Marine and Wildlife Resources
Ruth Utzurrum	Biologist (Birds)	Am Samoa Department of Marine and Wildlife Resources

Publications associated with this Project:

PARK : **NPSA**

Topic Landscape

Project Title Botanical and Ethnobotanical Inventories of the National Park of American Samoa
By: National Tropical Botanical Garden

First Year: 2001 End Year: 2002 Status Complete Proj Duration 1 year

Data Type/Location Species samples were recorded with a dbh greater than or equal to 5cm at 1.3m above the ground with the exception of buttressed trees, their diameter was measured above the buttress.

Comments:

Data Collected Tau-April 10-15, 2001 and May 29-June 6, 2002
Ofu and Olosega-April 16-28 and June 9-23, 2001
Tutuila-September 1-6,2002

Proj Purpose The management plan (NPS 1997) identified a critical need for information and understanding of the extent and nature of subsistence uses within the Park.

Proj Usefulness

Oranizations associated with this Project:

National Tropical Botanical Garden

Theme Keywords associated with Project

Contact Persons associated with this Project:

Diane Ragone Director National Tropical Botanical Garden

Publications associated with this Project:

PARK : **NPSA**

Topic Marine

Project Title Coral Reef Ecosystem Monitoring Program

First Year: 1995 End Year: Status In work Proj Duration Surveys in 1995 & 2002

Data Type/Location Expert fish and coral surveys conducted every 3-5 years include Park boundaries. Reef fishes surveys 5x50m belt transets at 10m depth. Point-based method for habitat description. Coral surveys 20x.05m belt transects on reef slope at 10 m depth.

Comments: Plans for another survey in 2005?

Data Collected Quantitative surveys of coral and reef communities (at the species level) and key macroinvertebrates (giant clams and COTS).

Proj Purpose Monitor the coral reef ecosystem.

Proj Usefulness Provides information on changes in the coral reef ecosystem.

Oranizations associated with this Project:

Am Samoa Department of Marine and Wildlife Resources

Theme Keywords associated with Project

benthic

coral reef

fish

macroinvertebrates

Contact Persons associated with this Project:

Publications associated with this Project:

As of Nov. 25, 2003 on desktop version of NatureBib. Status of coral communities on the volcanic islands of America Samoa. David Fisk & Charles Birkeland. 2002.

As of Nov. 20, 2003 on desktop version of NatureBib. Status of coral reefs on the main volcanic islands of American Samoa: a resurvey of long term monitoring sites, (benthic communities, fish communities, and key macroinvertebrates). Alison Green. 2002.

As of Nov. 20, 2003 on desktop version of NatureBib. The American Samoan coral reef monitoring program. A.S. Cornish & D. T. Wilson. 2002

PARK : **NPSA**

Topic Marine Project Title Coral Reef Monitoring Program

First Year: 1999 End Year: Status In work Proj Duration see info in type/location section

Data Type/Location Water temperature at 0.5-2 hour intervals; monitor subsistence fishery in Ofu at 5-year intervals.

Comments: Monitoring program is being developed.

Data Collected At present (2003), water temperatures have been monitored for several years at sites on Tutuila and Ofu islands, a baseline survey of the subsistence fishery on Ofu has been conducted, and protocols are being developed for other parameters to be monitored.

Proj Purpose Assess the health (changes in condition over time) of the coral reef environment and implement management changes when warranted.

Proj Usefulness Very useful in tracking changes in water temperatuers and baseline data of the subsistence fishery.

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

coral reef

subsistence fishery

temperature

Contact Persons associated with this Project:

Peter Craig	Marine Biologist	National Park of American Samoa

Publications associated with this Project:

BibKey ID 551969. Craig, Birkeland, & Belliveau. 2001.

PARK : **NPSA**

Topic Geology Project Title Earthquake Monitoring Program

First Year: 1995 End Year: Status In work Proj Duration daily recordings worldwide

Data Type/Location worldwide

Comments: As this is a worldwide monitoring project, there is information on "Magnitudes of Significant Quakes since 1556". Latest information regarding American Samoa is located on "The Largest Earthquakes in the World in the Past 10 Years: 1989 to 1998" page and "Samoa Islands Region: 6.1 Earthquake: 10/7/2003" page.

Data Collected Daily recordings of earthquake activity nationwide including date, time, latitude, longitude, magnitude, and depth.

Proj Purpose Monitor earthquakes in an effort to reduce hazards.

Proj Usefulness Historical seismicity would benefit others regarding effects of quakes in American Samoa.

Oranizations associated with this Project:

US Geological Survey

Theme Keywords associated with Project

earthquakes

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **NPSA**

Topic Climate Project Title Evapotranspiration on Tutuila, American Samoa. USGS

First Year: 2000 End Year: 2002 Status Complete Proj Duration 2 years

Data Type/Location Rain gage located at Mount Alava in NPSA, 8 additional sites outside NPSA on Tutuila

Comments:

Data Collected March 2000 to June 2002

Proj Purpose Part of a larger study investigating the availability of groundwater on Tutuila and Anuu, American Samoa

Proj Usefulness Data provides information about availability of water resources of the island for water management issues or ecological studies.

Oranizations associated with this Project:

US Geological Survey

USGS - Water Resources Division

Theme Keywords associated with Project

evaporation

rainfall

Contact Persons associated with this Project:

Scot Izuka	Hydrologist	US Geological Survey
Stacie Young		US Geological Survey

Publications associated with this Project:

PARK : **NPSA**

Topic Climate Project Title Hotspot Satellite Maps Sea Surface Temperature Monitoring

First Year: 1985 End Year: Status In work Proj Duration recordings since 1985

Data Type/Location worldwide

Comments:

Data Collected Daily recordings of sea surface temperature (SST)

Proj Purpose Monitor sea surface temperatures worldwide via satellites, determine when unseasonably warm temperatures occur, and predict areas where coral bleaching may occur.

Proj Usefulness Very useful to alert managers of coral reef areas that may become bleached due to warm SST.

Oranizations associated with this Project:

National Oceanic and Atmospheric Administration

Theme Keywords associated with Project

coral bleaching

SST

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **NPSA**

Topic Climate Project Title Hydrologic data collection in American Samoa. USGS

First Year: 1958 End Year: Status In work Proj Duration

Data Type/Location Sites located on Tutuila. Network of 5 rain gages, 6 surface-water gages, and 52 wells (ground-water sites) is maintained. Data are collected using standard USGS methods

Comments: Next to check if NPSA has a copy of the 2 publications associated with this project.

Data Collected Rainfall, stream flow and ground-water levels.

Proj Purpose Assessing water resources to provide provide scientific information for the management of water resources.

Proj Usefulness Data are useful to Federal, State, and local planners for: (1) assessing water availability, flooding hazards, drought conditions, and ground-water/surface-water interactions, (2) estimating future conditions, (3)managing water resources.

Oranizations associated with this Project:

US Geological Survey

American Samoa Power Authority

Theme Keywords associated with Project

ground water level

rainfall

stream flow

Contact Persons associated with this Project:

Scot Izuka	Hydrologist	US Geological Survey
Stacie Young		US Geological Survey
Barry Hill	Project Chief	US Geological Survey

Publications associated with this Project:

Hill, B.R., and Fontaine, R.A. 2000, Water resources data Hawaii and other Pacific areas, water year 1990.

Guam, Northern Mariana Islands, Federated States of Micronesia, Palau, and American Samoa: U.S. Geological Survey Water Data Report HI-90-2

PARK : **NPSA**

Topic Vertebrates Project Title Inventory and Monitoring of Seabirds

First Year: 2002 End Year: 2003 Status In work Proj Duration 2 years

Data Type/Location Coastal counts.

Comments: Contract No.: 8036-2-9004. Contribution Number: 132 PSCU/UH. Plans are to complete this one-time project by March/April 2004. Ryan is still figuring out what the park's level of monitoring will be.

Data Collected Inventory of seabird.

Proj Purpose Preliminary monitoring of American Samoa seabird populations around Tutuila Island.

Proj Usefulness Established a protocol for surveying seabirds around Tutuila Island and future efforts can be compared to existing results.

Oranizations associated with this Project:

University of Hawaii - Manoa

Theme Keywords associated with Project

birds

Contact Persons associated with this Project:

Mark Rauzon	University of Hawaii - Manoa
Paul O'Connor	University of Hawaii - Manoa

Publications associated with this Project:

As of Nov. 26, 2003 on desktop version of NatureBib. Inventory and Monitoring of Seabirds in National Park of American Samoa. June 2003.

PARK : **NPSA**

Topic Vegetation Project Title Long-term Monitoring Plots (LTMPs) of Trees

First Year: 1999 End Year: Status In work Proj Duration monthly data collected since 1999

Data Type/Location Four 1.2 ha permanent forest plots in Tutuila. Trees marked with a numbered metal tag.

Comments: Similar work on Tau starting in Summer 2004 (complete Sept. 2005).

Data Collected Monthly phenological census. Forest composition and structure.

Proj Purpose Census to determine new recruits and mortality patterns of trees (Webb's). First investigation (1999) was of spatial variation of rainforest tree community structure and composition to determine if forest structure and diversity varied as a function of topography; and in turn if this could influence patterns of habitat use by native forest birds and pteropodid bats.

Proj Usefulness Excellent tool for a wide variety of ecological studies.

Oranizations associated with this Project:

Am Samoa Department of Marine and Wildlife Resources

Theme Keywords associated with Project

demography

dispersal

phenology

Contact Persons associated with this Project:

Joshua Seamon	Biologist (Bats)	Am Samoa Department of Marine and Wildlife Resources
Ruth Utzurrum	Biologist (Birds)	Am Samoa Department of Marine and Wildlife Resources

Publications associated with this Project:

As of Nov. 26, 2003 on desktop version of NatureBib. Effects of topograhpy on rainforest tree community structure and diversity in American Samoa, and implicaitons for frugivore and nectarivore populations. Edward Webb. 1999.

As of Nov. 26, 2003 on desktop version of NatureBib. Diversity and structure of tropical rain forest of Tutuila, American Samoa: effects of site age and substrate. Edward Webb. 1999

PARK : **NPSA**

Topic Invasives Project Title Monitoring Activity Transect of Feral Pigs

First Year: 1997 End Year: Status In work Proj Duration yearly activity summaries since 1997

Data Type/Location Ten activity transects on Tutuila and three transects on Ta`u. Goal is to survey at least once a year (all transects) + areas of concern more often. Snares are present throughout the Park.

Comments: Feral pig management is being re-evaluated at this time. Check back in summer of 2004.

Data Collected Yearly summary counts of snared pigs and monitoring signs of activity.

Proj Purpose Monitoring of activity transect data collection and ongoing snaring.

Proj Usefulness Data can be useful in pig management (i.e. increase population could result in adding additional traps).

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

feral pig

terrestrial mammals

Contact Persons associated with this Project:

Mino Fialua	Safety Officer	National Park of American Samoa

Publications associated with this Project:

PARK : **NPSA**

Topic | Project Title: Monitoring coral health spectrally in the Pacific Islands US National Parks

First Year: | End Year: | Status | Proj Duration

Data Type/Location

Comments:

Data Collected

Proj Purpose: "...To develop spectral monitoring methods to determine the health of corals located in US Pacific Islands National Parks. The spectral properties of corals under stress conditions associated with bleaching and disease will be identified and characterized for development of a coral health spectral database."

Proj Usefulness

Oranizations associated with this Project:

University of Hawai'i, School of Ocean and Earth Sciences and Technology, Department of Oceanography

University of Hawaii at Manoa, Hawaii Institute of Marine Biology

Theme Keywords associated with Project

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **NPSA**

Topic: Marine | Project Title: Monitoring Fisheries

First Year: 1980 | End Year: | Status: In work | Proj Duration: varies since 1980

Data Type/Location: Reef fisheries, (creel survey from 1991 to 1995), counting numbers of fishers at 2-hour intervals. Pelagic and bottomfish fisheries, document boat landings started in 1980.

Comments:

Data Collected: Summary of species caught, weight, catch per unit effort.

Proj Purpose: Monitor catch statistics for territory's pelagic, bottomfish and shoreline reef fisheries.

Proj Usefulness: Data are not specific to NPSA but are an informative summary for territory.

Oranizations associated with this Project:

Am Samoa Department of Marine and Wildlife Resources

Theme Keywords associated with Project

commercial invertebrate harvest

fish harvest

subsistence

Contact Persons associated with this Project:

Ray Tulafono	Director	Am Samoa Department of Marine and Wildlife Resources

Publications associated with this Project:

PARK : **NPSA**

Topic Invasives Project Title Monitoring Invasive Trees

First Year: 2003 End Year: Status In work Proj Duration

Data Type/Location Includes all of NPSA.

Comments: ASCC has started an inventory and analysis of forest types (one-time project) which entails a land-cover map of all American Samoa of forest types. This includes plot work, one plot is in the Park (Tau).

Data Collected Distribution and abundance of invasive trees.

Proj Purpose Monitoring invasive trees in the Park.

Proj Usefulness

Oranizations associated with this Project:	Theme Keywords associated with Project
US National Park Service	forest invasive trees trees

Contact Persons associated with this Project:

Tavita Togia	Terrestrial Biologist Tech	National Park of American Samoa

Publications associated with this Project:

PARK : **NPSA**

Topic Climate Project Title Pago Airport Station Air Temperature and Rainfall Monitoring

First Year: 1960 End Year: Status In work Proj Duration recordings since 1960

Data Type/Location Pago Pago International Airport.

Comments: Data indicates a steady increase in air temperature since about 1975. This may, in part, reflect the sensor: location in an increasingly urbanized area. Air temperatures at NOAA's Tula station do not show a similar increase.

Data Collected Temperature and rainfall.

Proj Purpose Monitor air temperature and rainfall at Tafuna airport.

Proj Usefulness Useful data regarding trends in temperature and rainfall.

Oranizations associated with this Project:	Theme Keywords associated with Project
National Oceanic and Atmospheric Administration National Climate Data Center	air temperature rainfall

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **NPSA**

Topic Marine Project Title Sea Surface Temperature (SST) Monitoring Project

First Year: 2002 End Year: Status Planned Proj Duration another survey in 2006

Data Type/Location SST buoys, ocean current drifters, fish belt transects, video transects of benthic habitats.

Comments: Follow-up surveys are proposed every two years.

Data Collected SST, fish, and corals. First sampling effort was in February 2002. Second sampling effort was in February 2004.

Proj Purpose Monitor SST, fish, and coral in American Samoa.

Proj Usefulness Very useful, but no report yet. Focus is to establish monitoring throughout the territory (includes park).

Oranizations associated with this Project:	Theme Keywords associated with Project
Coral Reef Ecosystems Investigation	coral reef drifter fish SST

Contact Persons associated with this Project:

Rusty Brainard	Chief, Coral Reef Investigation	Pacific Islands Fisheries Science Center National Marine Fisheries Service (NOAA)

Publications associated with this Project:

PARK : **NPSA**

Topic Climate Project Title Tsunami Monitoring

First Year: End Year: Status Proj Duration

Data Type/Location Pago Harbor at Dept. of Marine & Wildlife Resources dock.

Comments:

Data Collected Water height.

Proj Purpose Monitor tsunamis in Pacific.

Proj Usefulness

Oranizations associated with this Project:	Theme Keywords associated with Project
National Oceanic and Atmospheric Administration Am Samoa Department of Marine and Wildlife Resources	water level

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **NPSA**

Topic Air Quality Project Title Tula Station Air Temperature Monitoring

First Year: 1976 End Year: Status In work Proj Duration recordings since 1976

Data Type/Location Tula Station (Samoa Observatory) located on the eastern end of Tutuila Island records air temperatures at about 50 feet above the ground.

Comments:

Data Collected Hourly recordings of CO2, temperature + more.

Proj Purpose Long-term monitoring of world's air quality.

Proj Usefulness Useful data regarding trends in temperature.

Oranizations associated with this Project:

National Oceanic and Atmospheric Administration

Theme Keywords associated with Project

air temperature

CO2

Contact Persons associated with this Project:

Mark Cunningham	Engineer	NOAA National Oceanic and Atmospheric Administration

Publications associated with this Project:

PARK : **NPSA**

Topic Geology Project Title Volcanic Hazards Assessment of Tau Island - Study #: NPSA-00201 and NPSA-00216

First Year: 2002 End Year: 2005 Status In work Proj Duration 3-4 week collection in June 2002

Data Type/Location 3-4 week collection of initial gravity, GPS data and charcoal samples for Carbon-14 dating.

Comments: NPS Permit: NPSA-2002-SCI-0001 and NPSA-2004-SCI-0002

Data Collected High-precision Global Positioning System (GPS) surveys (one in June 2002, gravity surveys, and dating of recent lava flows.

Proj Purpose Evaluate the volcanic hazards of the island of Tau.

Proj Usefulness This project will be an asset to the inhabitants of Samoa and hopefully instigate a regional volcanic hazards mapping endeavor.

Oranizations associated with this Project:

Massachusetts Institute of Technology

Theme Keywords associated with Project

geology

Global Positioning System (GPS) surveys

gravity surveys

lava flow

volanic hazards

Contact Persons associated with this Project:

Jared Standish		Massachusetts Institute of Technology
Margaret Boettcher		Massachusetts Institute of Technology
Rhea Workman	PhD Student	Massachusetts Institute of Technology
Stanley Hart		Massachusetts Institute of Technology

Publications associated with this Project:

As of Dec. 2, 2003 on desktop version of NatureBib. Volanic Hazards Map for Tau Island, American Samoa.

PARK : **PUHE**

Topic Water Quality Project Title Baseline survey of Makeahua Gulch Watershed

First Year: 1999 End Year: 1999 Status Complete Proj Duration

Data Type/Location The team would traverse the channel, stopping every several hundred years. At channel stops, the channel dimensions were recorded, the general character of the channel was noted and the average width and depth of loose sediment was recorded.

Comments: School project

Data Collected Channel dimensions, general character of channel, and the average width and depth of loose sediment were recorded.

Proj Purpose To estimate volume of sediment currently stored in Makeahua Gulch and its tributaries. To provide an objective assessment of the condition of the watershed.

Proj Usefulness

Oranizations associated with this Project:

Mauna Kea Soil and Water Conservation District

Theme Keywords associated with Project

erosion

sediment

Contact Persons associated with this Project:

Jene Michaud University of Hawaii - Hilo

Publications associated with this Project:

UHH Geology class with Jene Michaud. Baseline Survey of Makeahua Gulch Watershed. 1999.

PARK : **PUHE**

Topic Fauna Project Title Biological Inventory of Anchialine Pools in National Parks of Hawaii

First Year: End Year: Status Planned Proj Duration

Data Type/Location Candidate anchialine pools, fish ponds, and other brackish water habitat occur in ALKA, HAVO, KAHO, KALA, and PUHO.

Comments:

Data Collected A time-activity budget will be compiled for Megalagrion xanthomelas (MEGXAN). Other odonates will also be counted. A second observer will make a 3-minute visual count of fish, followed by targeted netting of distinct morphotypes. Potential species of concern (SOC) invertebrates will be collected. All CLMH surveyed will be measured for temperature, dissolved oxygen, specific conductance/salinity, and pH.

Proj Purpose 1. Create park-specific anchialine pool databases that tabulate and cross-reference GPS data, anchialine pool descriptions, and historical faunal surveys for all coastal lentic mixohaline habitat (CLMH).
2. Classify anchialine pools by associated vegetation, substrate, water chemistry, and physical size characteristics.
3. Inventory all known CLMH for MEGXAN and alien fauna.
4. Inventory stratified subsamples of CLMH for other potential arthropod SOCs
5. Compare historical data for alien fish and odonates with current surveys to detect range expansions of these species.
6. Estimate relative species abundance for a subset of pools with good historical records

Proj Usefulness

Oranizations associated with this Project:

National Parks Service Inventory and Monitoring

US Geological Survey

Theme Keywords associated with Project

cultural

invertebrates

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **PUHE**

Topic Marine

Project Title Changes in the marine habitat and biota of Pelekane Bay, Hawaii over a 20-Year Period

First Year: 1996 End Year: 1996 Status Complete Proj Duration

Data Type/Location Sampling of 3 50-foot transects on patch reefs

Comments:

Data Collected Species and abundance. March 1998.

Proj Purpose To compile species lists, relative abundance

Proj Usefulness

Oranizations associated with this Project:

Theme Keywords associated with Project

- deforestation
- grazing
- marine biota
- sediment

Contact Persons associated with this Project:

Brian Tissot	University of Hawaii - Hilo

Publications associated with this Project:

PARK : **PUHE**

Topic Vegetation

Project Title Effects of fire, nutrients and water on competition between pili grass (Heteropogon contortus) and introduced African grasses in dryland habitats

First Year: 1998 End Year: Status In work Proj Duration

Data Type/Location Fixed 1-meter square plots within 20x15 meter sites at Puu Kohola

Comments: Continued monitoring of the plots in 2004 or beyond will depend upon funding for additional burns, although it is hoped that the plots can be re-surveyed annually even if no further controlled burns take place.

Data Collected The following data were periodically collected from fixed 1-meter square plots within two 20 x 15 meter sites at Puu Kohola between 1998 and early 2003, following repeated experimental burns at Puu Kohola. Initially, following a burn, the data were collected monthly for the first 3 months, then every other month or less. There were 3 controlled burns between 1998 and 2002.
"Total % cover of pili grass
"Number of pili grass seedlings
"Total % cover of buffel grass
"Number of buffel grass seedlings
"Presence and % cover for any other species in the plots

Main plot treatments were as follows:
"Burned or unburned
"Pili grass seed addition or no seed addition
"Hand pulling of buffel grass before burning or no hand pulling
"Herbicide treatment after burning or no herbicide
"Planting of juvenile plants to monitor survival rates after fire

Proj Purpose To determine if fire can be used as a management tool to increase pili grass (Heteropogon contortus) establishment and cover and which fire regimes can favor pili grass over buffel grass. Tp deterine if additional manipulations besides burning (seed additions, hand weeding, water supplementation, herbicide) may be needed in order to effectively re-establish pili grasslands

Proj Usefulness

Oranizations associated with this Project:	Theme Keywords associated with Project
University of Hawaii - Manoa	vascular plants

Contact Persons associated with this Project:

Curtis Daehler	University of Hawaii - Manoa
Erin Goergen	University of Hawaii - Manoa
Mindy Wilkinson	University of Hawaii - Manoa

Publications associated with this Project:

Daehler, C. 1998. Using fire to restore and manage pili grasslands at Puukohola National Historic Site.

Daehler, C. Fire as a tool for restoring native pili grasslands at Puu Kohola National Historic Site.

Daehler C. and E. Goergen Seed ecology and propagation of pili grass (Heteropogon contortus).

PARK : **PUHE**

Topic Fish

Project Title Impacts of Aquarium Fish Collecting and the Effectiveness of Marine Protected Areas in Hawaii

First Year: 1999 End Year: Status In work Proj Duration

Data Type/Location See above box

Comments:

Data Collected Our basic experimental design seeks to compare newly closed sites (FRA) to those which remain open (impact) and those that remain closed (control). To implement this design, we have established 23 study sites where permanent transect lines have been installed. These include 9 FRAs, 8 Impact sites, and 6 controls. Fish densities are estimated by visual strip transect search along each permanent transect line. At each of the 24 sites, four 25 m transect lines are deployed using permanently installed eyebolts as geographic markers for the ends of each transect. Transects are located by differential GPS. Two pairs of divers survey the lines, each pair searching two of the 25 m lines. Each site is scheduled to be surveyed bi-monthly, weather permitting, for a total of six surveys per year.

The search of each line consists of two divers, swimming side-by-side on each side of the line, surveying a column 2 m wide. On the outward-bound leg, larger planktivores and wide-ranging fishes within 4 m of the bottom are recorded. On the return leg, fishes closely associated with the bottom, juveniles, and fishes hiding in cracks and crevices are recorded.

In addition, we propose to document recruitment patterns for selected aquarium and non-aquarium fish species at the Honokohau/Old Kona Airport design block (control-impact-FRA), an area in which we already have three years of data on adult patterns of abundance. The abundance of newly settled fishes will be estimated by using stationary circular plots, randomly allocated across a wide range of habitat types (reef flat, reef bench, reef slope) at each site. Recruitment patterns will be documented quarterly through an intensely time-replicated design whereby fine-scale temporal patterns in fish movement and abundance can be estimated at each site.

We will also estimate coral cover at each site by photographic analysis. We will utilize standard methods developed by CRAMP to estimate coral abundance, diversity and distribution. Currently these include digital video imaging to record 50 contiguous frames along each transect line (n=200 photographs for each site). We will also measure additional habitat measures, such as rugosity, which will provide habitat information consistent with Jim ParrishÃƒÂ,Ã‚Â's proposed study on nearshore fishing impacts.

Proj Purpose

Proj Usefulness

Oranizations associated with this Project:

Washington State University, Vancouver

University of Hawaii - Hilo

Division of Land and Natural Resources

Oregon State University

Theme Keywords associated with Project

biological

fish

Contact Persons associated with this Project:

Bill Walsh		Division of Land and Natural Resources
Brian Tissot	Associate Professor of Environmental Science & Regional Planning	
Leon Hallacher		University of Hawaii - Hilo
Mark Hixon		

Publications associated with this Project:

Tissot, B. N. 1999. Adaptive Management of Aquarium Fish Collecting in Hawaii. Live Reef Fish Information Bulletin 6: 16-19. [html] [PDF]

Tissot, B. N. and D. M. Brosnan. 2002. Long Term Coral Reef Monitoring Programs: Working Towards a Synthesis of Science, Management and Policy. In: Best, B. and R. Pomeroy, Relevant Findings from the 9th International Coral Reef Symposium: Implications for Coral Reef Management and Policy. USAID. [PDF] [Full document].

Tissot, B. N. and L. E. Hallacher. 2003. The effects of aquarium collectors on coral reef fishes in Hawaii. Conservation Biology. 17(6) |html| |PDF|

Tissot, B. N. , Walsh, W. and L. E. Hallacher. 2004. Evaluating the effectiveness of a marine reserve network in Hawaii to increase the productivity of an aquarium fishery. Pacific Science 58(2): 175-188. in press

Brown, Eric. Evelyn Cox, Paul Jokiel, , Ku'ulei Rodgers, William Smith, Brian Tissot, Steve L. Coles, and Jonathan Hultquist. 2004. Development of benthic sampling methods for the Coral Reef Assessment and Monitoring Program (CRAMP) in Hawai'i. Pacific Science 58(2) in press

Tissot, B. N. in press. Integral Marine Ecology: Community-based fishery management in Hawai`i. World Futures: the Journal of General Evolution.

Tissot, Brian N. and L. E. Hallacher. 1999. Impacts of aquarium collectors on reef fishes in Kona, Hawai'i. Division of Aquatic Resources, Honolulu, HI. Technical Report. [html]

PARK : **PUHE**

Topic Terrestrial Invertebrates Project Title Kona Small Park Insect Survey

First Year: 1992 End Year: 1992 Status Complete Proj Duration

Data Type/Location

Comments:

Data Collected All insect taxa surveyed in 1992.

Proj Purpose Assess insect fauna of the three small NHPs on the Kona coast of Hawaii.

Proj Usefulness Baseline distribution data for native and exotic insect species in coastal Kona.

Oranizations associated with this Project:	Theme Keywords associated with Project
US Geological Survey	invertebrates

Contact Persons associated with this Project:

David Foote	Ecologist	US Geological Survey

Publications associated with this Project:

PARK : **PUHE**

Topic Marine Project Title Mitigation of Reef Damage at Kawaihae Harbor Through Transplantation of Reef Corals

First Year: 1995 End Year: 1997 Status Complete Proj Duration

Data Type/Location Depths of sediments were measured using permanent stakes. 4 sediment traps were depolyed at each site and collected at monthly intervals. Bulk samples were collected at each site in November 1996. Sediment analysis included grain size and organic and carbonate fraction. Sediment mobility was also tested. Wave heights were estimated.

Comments:

Data Collected Corals were transplanted. Sampled for condition of corals, sediment depth, sediment analysis including grain size and organic and carbonate fraction, and mobility.

Proj Purpose To evaluate the use of transplant technique as a possible means of mitigating damage to Hawaiian coral reefs. To evaluate the success of the method, through monitoring survival of transplanted corals using visual censusing and photographic techniques.

Proj Usefulness

Oranizations associated with this Project:	Theme Keywords associated with Project
Hawaii Institute of Marine Biology	coral reef

Contact Persons associated with this Project:

Paul Jokiel	Hawaii Institute of Marine Biology
Darby Irons	Hawaii Institute of Marine Biology
Evelyn F Cox	Hawaii Institute of Marine Biology
Franklyn Te	Hawaii Institute of Marine Biology

Publications associated with this Project:

Mitigation of Reef Damage at Kawaihae Harbor Through Transplantation of Reef Corals

PARK : **PUHE**

Topic Landscape Project Title Pelekane Bay Coordinated Resource Management Plan

First Year: End Year: Status In work Proj Duration

Data Type/Location experimental paddock rotation in ranch areas, sediment traps and rain gauges in streams and gulches, automated flowmeter and turbidimeter in lower reach of streams

Comments:

Data Collected erosion rates, vegetation growth, and precipitation in watershed, flow rate and turbidity in Makeahua Stream and eventually Makahuna gulch

Proj Purpose reduction and mitigation of erosion from watershed into Pelekane Bay

Proj Usefulness

Oranizations associated with this Project:

- Mauna Kea Soil and Water Conservation District
- US Department of Agriculture National Resources Conservation Service

Theme Keywords associated with Project

- coral reef
- vascular plants
- watersheds

Contact Persons associated with this Project:

Carolyn Stewart	Mauna Kea Soil and Water Conservation District

Publications associated with this Project:

PARK : **PUHE**

Topic Water Quality Project Title Pelekane Bay Watershed sediment yield

First Year: 1997 End Year: 1997 Status Complete Proj Duration

Data Type/Location Used RUSLE, PSIAC, and MUSCLE methods.

Comments:

Data Collected Volume of sediment leaving the Pelekane Bay Watershed. 1997.

Proj Purpose

Proj Usefulness

Oranizations associated with this Project:

- University of Hawaii - Hilo

Theme Keywords associated with Project

- erosion
- sediment

Contact Persons associated with this Project:

Jene Michaud	University of Hawaii - Hilo

Publications associated with this Project:

PARK : **PUHE**

Topic Marine Project Title Physiography and Marine Fauna of Inshore and Intertidal Areas in PUHE

First Year: 1976 End Year: 1976 Status Complete Proj Duration

Data Type/Location Two 50-m transect lines were installed at a depth of 4-5 meters.

Comments:

Data Collected The field work was conducted from April-June 1976. FISH: SCUBA was used to survey the fish fauna of the site. The species list was compiled from 6 hours of underwater observations throughout the biotope types of the bay. Three replicate censuses were performed on each transects (April 2 and 10). Fish were counted 5 m on each side of the line and data recorded in 5- m^2 quadrats on underwater Ascot paper. All fished were counted an juvenile stages were noted. In additions to offshore observations, intertidal, brackish water, and pond fishes were captured for identification with small hand nets and mini spears. BENTHIC INVERTEBRATES: Quadrats of 100 m^2 were sampled qualitatively within each biotope by recording or collecting the benthic eip- and infauna. When possible, relative abundance estimates were made for the dominant taxa. Additional identification of macroinvertebrates, was made from samples of living and dead coral heads, coralline and fleshy algae, and basal or limestone rubble. These were identifiedin the lab. The infauna in sand and mud was collected by filtering through a net. The line transects exmployed for the fish censuses were used to enumerate corals and other benthic invertebrates in the coral-rich fringe zone of the site. Biota and substrate were recorded in 1-m increments along the line, and samples were taken at points where an immediate identification could not be made. Mollusk information was obtained by a random sampling of patch reefs and sand deposits witin the offshore portion of the site and by a detailed search along the intertidal zone.

Proj Purpose This report describes the biotopes and marine fauna of the reefs adjacent to the site and offers recommendations for the maintenance of the biota and shoreline development. The marine flora is described in a separate survey report (Ball 1977- make sure to look for this).

Proj Usefulness

Oranizations associated with this Project:

Theme Keywords associated with Project

marine fauna

Contact Persons associated with this Project:

Don Hemmes	University of Hawaii - Hilo
Daniel Cheney	Neighbor Island Consultants
Ronald Nolan	Ocean Research Consulting and Analysis

Publications associated with this Project:

Cheney et al. 1977. The physiography and marine fauna of inshore and intertidal areas in the Puukohola Heiau National Historic Site. CPSU Tech. Report #13.

PARK : **PUHE**

Topic Landscape Project Title Pili Grass Propagation Program

First Year: End Year: Status Proj Duration

Data Type/Location

Comments:

Data Collected

Proj Purpose Tips and tactics for reproduction of Pili grass.

Proj Usefulness These methods are useful for resource managers of other parks in the Pacific

Oranizations associated with this Project:

Theme Keywords associated with Project

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **PUHE**

Topic Vegetation Project Title Pololei Monitoring

First Year: End Year: Status In work Proj Duration

Data Type/Location

Comments:

Data Collected After rain, park employees may walk around and look for pololei. This is usually recorded on a calendar.

Proj Purpose To monitor pololei.

Proj Usefulness

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

Contact Persons associated with this Project:

Daniel Kawaiaea	US National Park Service

Publications associated with this Project:

PARK : **PUHE**

Topic Project Title Sediment Management Plan for Pelekane Bay Watershed Management Project

First Year: End Year: Status In work Proj Duration

Data Type/Location Coastal water quality monitoring (turbiduty, chlorophyll a, temperature, salinity, and pH). Erosion monitoring (check dams, rain gauges). Vegetative cover monitoring (transects- ongoing). Stubble height monitoring (ongoing).

Comments:

Data Collected Proposed monitoring activities

Proj Purpose To reduce soil erosion in the watershed by improving land management practices and restoring vegetative ground cover.

Proj Usefulness

Oranizations associated with this Project:

Mauna Kea Soil and Water Conservation District

Theme Keywords associated with Project

erosion

sediment

water quality

Contact Persons associated with this Project:

Carolyn Stewart	Mauna Kea Soil and Water Conservation District

Publications associated with this Project:

Stewart, Carolyn 2001. Sediment Management Plan for Pelekane Bay Watershed Management Project.

PARK : **PUHE**

Topic Marine Project Title Shark Observations

First Year: End Year: Status In work Proj Duration

Data Type/Location

Comments:

Data Collected Each day the beach is walked by a park employee. Shark sitings are usually recorded on a calendar.

Proj Purpose To monitor sharks

Proj Usefulness

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

Contact Persons associated with this Project:

Daniel Kawaiaea	US National Park Service

Publications associated with this Project:

PARK : **PUHE**

Topic Water Quality Project Title Stream Monitoring

First Year: 1971 End Year: 1997 Status Complete Proj Duration

Data Type/Location The U. S. Geological Survey collected data from 4 streams located in the watershed containing PUHE.

Comments:

Data Collected temperature, flow, depth, turbidity, color, specific conductance, dissolved solids,dissolved oxygen, pH, carbon dioxide, alkalinity, bicarbonate, carbonate, nitrite/nitrate, ortho-phosphate, phosphorous, silicon, total hardness, dissolved minerals; calcium, magnesium, sodium, potassium, chloride, sulfate, and fluoride, and the metals; hexavalent chromium, cobalt, copper, iron, lead, manganese, nickel, strontium, zinc, aluminum, and lithium. Assays were performed to determine total coliform using membrane filtration.

Proj Purpose

Proj Usefulness

Oranizations associated with this Project:

US Geological Survey

Theme Keywords associated with Project

biological

physical

watersheds

Contact Persons associated with this Project:

Gordon Tribble	Hawaii Water Resources, District Chief	US Geological Survey
Barry Hill	Assistant District Chief	US Geological Survey

Publications associated with this Project:

PARK : **PUHE**

Topic Water Quality Project Title Water Quality Monitoring

First Year: 1973 End Year: Status In work Proj Duration

Data Type/Location The State of Hawaii Department of Health conducted water quality monitoring at 9 coastal sites outside of the park.

Comments:

Data Collected Salinity was measured using a portable meter and determinations were made for fecal coliform and enterococci using membrane filtration.

Proj Purpose

Proj Usefulness

Oranizations associated with this Project: Theme Keywords associated with Project

State of Hawai`i Department of Health

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **PUHE**

Topic Water Quality Project Title Water Quality Monitoring Program, Kawaihae Small Boat Harbor

First Year: 1996 End Year: 1996 Status Complete Proj Duration

Data Type/Location Repetitive sampling at 5 stations. Stations 1 and 4 are located ~300 feet from the Harbor entrance channel. Stations 2 and 3 are located within 3 feet of the ocean side of the silt containment curtain that is deployed around the breakwaters that are under construction. Sampling was conducted during high and flooding tide. Samples were collected with a 1.8 liter Niskin-type oceanographic sampling bottle operated from a small boat. The bottle is lowered to the desired depth with spring-loaded endcaps cocked in an open position. A messenger released from the surface trips the bottle closed, isolating a volume of water that is returned to the surface. At each sampling site two samples were collected in 1-liter pre-washed sampling bottles. Surface samples were collected at a depth of 0.5 meters while bottom samples were collected 1 m above the ocean floor. Turbidity was measured on a 90 degree nephelometer. Salinity was measured on an AGE salinometer. Total suspended solids was determined gravimetrically. All laboratory analyses were conducted by Marine Analytical Specialists.

Comments: Prepared for Dutra Construction Co. Inc. Kawaihae HI 96743

Data Collected September 1996. Samples were measured for temperature, Chl a analyses, turbidity, salinity, and total suspended solids.

Proj Purpose To determine if construction activity is resulting in alteration of water quality.

Proj Usefulness

Oranizations associated with this Project: Theme Keywords associated with Project

Marine Research Consultants

water quality

Contact Persons associated with this Project:

Publications associated with this Project:

Marine Research Consultants. 1996. Water Quality Monitoring Program Kawaihae Small Boat Harbor, Island of Hawaii, Report 7-96

PARK : **PUHE**

Topic Marine Project Title West Hawai`i Aquarium Project (WHAP)

First Year: 1999 End Year: Status In work Proj Duration on-going

Data Type/Location Surveys began in March 1999 and are conducted on a bimonthly basis. All fish in four 100m^2 are counted.

Comments:

Data Collected Distribution and abundance of aquarium fishes in 23 sites since 1998 along west Hawai'I coastline in and adjacent to proposed FRAs.

Proj Purpose 1) Estimate impacts of aquarium fish collecting in West Hawaii
2) Evaluate effectiveness of the FRA plan to increase aquarium fisheries
3) Estimate critical habitat characteristics for adult and juvenile aquarium fishes
4) Document recruitment patterns of aquarium fishes

Proj Usefulness

Oranizations associated with this Project:

Washington State University, Vancouver

Hawai'I Division of Aquatic Resources

University of Hawaii - Hilo

Theme Keywords associated with Project

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **PUHO**

Topic Terrestrial Invertebrates Project Title Kona Small Park Insect Survey

First Year: 1992 End Year: 1992 Status Complete Proj Duration

Data Type/Location

Comments:

Data Collected All insect taxa surveyed in 1992.

Proj Purpose Assess insect fauna of the three small NHPs on the Kona coast of Hawaii.

Proj Usefulness Baseline distribution data for native and exotic insect species in coastal Kona.

Oranizations associated with this Project:

US Geological Survey

Theme Keywords associated with Project

invertebrates

Contact Persons associated with this Project:

David Foote Ecologist US Geological Survey

Publications associated with this Project:

PARK : **PUHO**

Topic Vegetation Project Title Roadside Weeds Survey

First Year: 2001 End Year: Status In work Proj Duration Dependent on availability of assistance for surveys

Data Type/Location Surveyors walk major roadsides on Hawaii Island. Both sides of the roadside are walked, as statistically significant differences are found in weed species on either side of the road.

Comments: Weed community assemblage on either side of the road has been found to have statistically significant differences.

Data Collected Survey of presence of weeds on major roadsides on Hawaii Island

Proj Purpose Survey of presence of weeds on major roadsides on Hawaii Island-Includes roads near PUHO

Proj Usefulness Documents presence of weeds, incipient invaders in and near the park. May allow resource management to more rapidly address priority weeds. Frequency of weed species, new records , distribution.

Oranizations associated with this Project:

US Geological Survey

Theme Keywords associated with Project

vascular plants

weed distribution

Contact Persons associated with this Project:

Kealii Bio	Big Island Weed Project Specialist	US Geological Survey
Linda Pratt	Botanist	US Geological Survey; HAVO Research Center, Building 216

Publications associated with this Project:

Poster, 2003 Hawaii Conservation Conference- Kealii Bio

PARK : **PUHO**

Topic Landscape Project Title Visitor use statistics

First Year: End Year: Status In work Proj Duration

Data Type/Location counts at entrance station

Comments:

Data Collected ongoing

Proj Purpose Recording and tracking incoming visitors for cultural reasons.

Proj Usefulness

Oranizations associated with this Project:

Theme Keywords associated with Project

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **PUHO**

Topic Marine Project Title West Hawai`i Aquarium Project (WHAP)

First Year: 1999 End Year: Status In work Proj Duration on-going

Data Type/Location Surveys began in March 1999 and are conducted on a bimonthly basis. All fish in four 100m^2 are counted.

Comments:

Data Collected Distribution and abundance of aquarium fishes in 23 sites since 1998 along west Hawai'I coastline in and adjacent to proposed FRAs.

Proj Purpose 1) Estimate impacts of aquarium fish collecting in West Hawaii
2) Evaluate effectiveness of the FRA plan to increase aquarium fisheries
3) Estimate critical habitat characteristics for adult and juvenile aquarium fishes
4) Document recruitment patterns of aquarium fishes

Proj Usefulness

Oranizations associated with this Project:

Washington State University, Vancouver

Hawai'I Division of Aquatic Resources

University of Hawaii - Hilo

Theme Keywords associated with Project

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **USAR**

Topic Water Quality Project Title

First Year: End Year: Status In work Proj Duration

Data Type/Location eight industrial sites in and around the Pearl Harbor Naval Compound

Comments:

Data Collected aluminum, arsenic, cadmium, chromium, copper, total cyanide, iron, lead, magnesium, mercury, nickel, selenium, silver, titanium, zinc, MBAS, chemical oxygen demand, biological oxygen, demand total suspended solids, total dissolved solids, ammonia, nitrate/nitrite, total nitrogen, total kjeldahl nitrogen, total phosphorous, pH, specific conductance, oil and grease, total petroleum hydrocarbons (THP), THP as gasoline, THP as diesel, total fuel hydrocarbons, and 21 organic compounds

Proj Purpose monitoring storm-water run-off

Proj Usefulness

Oranizations associated with this Project:

United States Navy

Theme Keywords associated with Project

Contact Persons associated with this Project:

Reid Makaewa

Publications associated with this Project:

PARK : **USAR**

Topic Water Quality Project Title

First Year: End Year: Status In work Proj Duration

Data Type/Location Fort KamehamehaWastewater Treatment Facility, Pearl Harbor

Comments:

Data Collected temperature, ammonia, nitrate/nitrite, total nitrogen, total phosphorous, turbidity, chlorophyll a, salinity, dissolved oxygen, and pH. The effluent is monitored continuously for total residual chlorine, and daily determinations are made for 5-day BOD, total suspended solids, pH, settleable solids, and oil and grease. Monthly analyses are performed to monitor effluent levels of ammonia, nitrate/nitrite, total nitrogen, total phosphorous, 5-day BOD and total suspended solids percent removal, the heavy metals; cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, and zinc, and toxicity testing with C. dubia and T. gratilla.

Proj Purpose monitoring sewage outfall

Proj Usefulness

Oranizations associated with this Project:

United States Navy

Theme Keywords associated with Project

Contact Persons associated with this Project:

Reid Makaewa

Publications associated with this Project:

PARK : **USAR**

Topic Water Quality Project Title Dynamics of the physical and chemical environment at the USS Arizona Memorial: 2002-200x

First Year: 2002 End Year: 2003 Status In work Proj Duration one full year

Data Type/Location Physical environment device (Sontek Triton wave/tide gauge with 10MHz ADV used to collect 3D single-point measurements of current velocity and acoustic backscatter data) deployed in 10m of wter 50 m southeast of USAR forward #1 turret. Seafloor here is organic rich fine silt/mud. Chemical monitoring device (YSI 6600 Sonde multisensor) deployed on USAR's hull collecting single-point measurements.

Comments:

Data Collected Current velocity, acoustic backscatter, pressure sensor to measure tides, direction wave spectra, water temp, salinity,pH,DO, and oxygen reduction potential measured every 15 minutes to 1 hour. Every 2 months devices were collected to download data.

Proj Purpose Objective was to understand how waves, currents & water column properties (temperature, salinity, pH, turbidity and dissolved oxygen) in the vicinity of the Memorial may vary over the year. This research is conducted to understand and characterize the nature and rate of natural processes affecting the deterioration of the USS Arizona

Proj Usefulness The rate of erosion of the boat is driven by different water quality factors. They will find out how these water quality parameters change during the course of a year, and how they change along the submerged ship.

Oranizations associated with this Project:

USGS, Pacific Science Center

US National Park Service

Theme Keywords associated with Project

cultural

erosion

physical

Contact Persons associated with this Project:

Curt Storlazzi	USGS, Pacific Science Center
Marshall Owens	US National Park Service
Matthew Russell	National Park Service, Sumberged Resources Center
Michael Field	USGS, Pacific Science Center

Publications associated with this Project:

PARK : **WAPA**

Topic Water Quality Project Title

First Year: End Year: Status In work Proj Duration

Data Type/Location Orote Peninsula and bay area

Comments:

Data Collected analysis for PCPs, heavy metals, dioxins, ferro-cyanins, and chlorinated pesticides

Proj Purpose Assess remediation of closed military dump

Proj Usefulness

Oranizations associated with this Project:

United States Navy

Theme Keywords associated with Project

benthic
coral reef
fish

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **WAPA**

Topic Aquatic Biology (fresh) Project Title (don't have exact title yet,) Stream assessment

First Year: 2004 End Year: 2004 Status Planned Proj Duration

Data Type/Location it is going to be a qualitative and preliminary-type data collection project

Comments: Metadata contact: Dwayne Minton, WAPA

Data Collected GPS locations
Spring/stream descriptions
Trip planned for February 2004

Proj Purpose Map and describe hydrological features (streams, any sign of persistent streamflow or springs); to also see whether NPS will monitor surface water, where gauges might be placed and what type of monitoring might be possible

Proj Usefulness There have been no new hydrological maps of this region since 1963. This project will give people an idea where springs, wetlands, streams are located in the park.

Oranizations associated with this Project:

USGS - Water Resources Division
US National Park Service

Theme Keywords associated with Project

geology
mapping
physical
watersheds

Contact Persons associated with this Project:

Dwayne Minton	Ecologist, War in the Pacific National Historic Park	US National Park Service
Gordon W. Trible	District Chief	Water Resources Division, USGS
Robert Carruth	Hydrologist	Water Resources Division, USGS

Publications associated with this Project:

PARK : **WAPA**

Topic Landscape Project Title (need title) savannah grassland erosion in Asan unit

First Year: End Year: Status Planned Proj Duration 1 full season

Data Type/Location 5 pin plots per strata type (4) that will be extrapolated to the entire savannah grassland. Strata type include: burned areas, mono-culture, native, & disturbed.

Comments: Dwayne Minton is Metadata contact

Data Collected Standared gross erosion rates, tonnage of dirt coming off 4 different strata type

Proj Purpose Baseline study to examine erosion from savannah grasslands in the Assan unit

Proj Usefulness The data will help to develop best management practices for fires, see how much dirt is coming off savannahs, compare with sediment coming onto the reef (sediment study) with what is known to be coming off the land

Oranizations associated with this Project:

- US National Park Service
- University of Guam
- Guam Division of Aquatic and Wildlife Resources
- Guam Department of Planning and Statistics

Theme Keywords associated with Project

- coral reef
- erosion
- fire
- grassland
- physical

Contact Persons associated with this Project:

Dr. Muhammed Golabi		University of Guam
Dwayne Minton	Ecologist, War in the Pacific National Historic Park	US National Park Service
Lynn Raulerson		University of Guam

Publications associated with this Project:

PARK : **WAPA**

Topic Project Title (Needs title) Baseline fisheries survey

First Year: End Year: Status Proj Duration

Data Type/Location

Comments: I have two reports for proposed fisheries related monitoring, just need to enter!!!!!!!

Data Collected

Proj Purpose

Proj Usefulness

Oranizations associated with this Project:

- University of Guam
- US National Park Service

Theme Keywords associated with Project

Contact Persons associated with this Project:

Mark Tupper	University of Guam

Publications associated with this Project:

PARK : **WAPA**

Topic Water Quality Project Title (Needs title) Enterococci monitoring at recreational beaches

First Year: 1974 End Year: Status In work Proj Duration on-going

Data Type/Location The monitoring program of Environmental Monitoring and Analytical Services Division takes water samples of 38 beaches every Wednesday; Beaches in close proximity to Piti and Asan include: Adelup Park Beach West, Asan Bay, Piti Park, Santos Memorial Park, United Seaman's Service, Rizal Beach, Namo Beach (North Togcha Beach), Agat Bay (Middle Togcha Beach), Southern Christian Academy Beach (South Togcha Beach)

Comments: Victoria Cummings was the contact for more information on the beach monitoring from the laboratory. Kimber Deverse talked with Jesse Cruz, but Anna Maria Leon Guerrero answered email questions. All three are biologists with the GEPA monitoring program.

Data Collected concentrations of the enterococcus bacteria

Proj Purpose Part of Water Monitoring Strategy for the Territory of Guam (WMSTG)
Monitoring of Guam's recreational beaches are mandated by 10 Guam Code Anootated, Chapter 47 (Water Pollution Control Act) to protect public health from the adverse effects of swimming in polluted waters. Guam EPA has provided this service to the community since 1974.

Proj Usefulness

Oranizations associated with this Project: Theme Keywords associated with Project

Guam Environmental Protection Agency

Contact Persons associated with this Project:

Anna Maria Leon Guerrero	Biologist, Monitoring Program	Guam Environmental Protection Agency
Veronica Cummings		Guam Environmental Protection Agency

Publications associated with this Project:

PARK : **WAPA**

Topic Project Title (NEEDS TITLE) Sea grass baseline surveys for future monitoring

First Year: End Year: Status Proj Duration

Data Type/Location

Comments: I'm waiting on more information from Celia Smith…

Data Collected

Proj Purpose Density, sizes, mapping all for monitoring

Proj Usefulness

Oranizations associated with this Project: Theme Keywords associated with Project

University of Hawaii - Manoa
US National Park Service

Contact Persons associated with this Project:

Dr. Celia Smith		University of Hawaii - Manoa
Dwayne Minton	Ecologist, War in the Pacific National Historic Park	US National Park Service
Kim Peyton		University of Hawaii - Manoa

Publications associated with this Project:

PARK : **WAPA**

Topic Project Title (NEEDS TITLE) US Navy monitor Orote Peninsula

First Year: End Year: Status Proj Duration

Data Type/Location

Comments: STILL DREDGING INFORMATION ON THIS…

Data Collected analysis of water, invertebrates and fish for PCBs, heavy metals, dioxins, ferro-cyanins, and chlorinated pesticides

Proj Purpose monitored as part of remidiation for Orote dump

Proj Usefulness

Oranizations associated with this Project: Theme Keywords associated with Project

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **WAPA**

Topic Project Title (needs title) WERI monitoring

First Year: End Year: Status Proj Duration

Data Type/Location

Comments: I have a bunch of information on this. It might be more than one monitoring project. I just need to enter it!

Data Collected

Proj Purpose Surface and ground water quality, pecticide and heavy metal contamination, soil runoff

Proj Usefulness

Oranizations associated with this Project: Theme Keywords associated with Project

University of Guam, Water and Energy Resources Institute

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **WAPA**

Topic Marine | Project Title Assessing coral recruitment as a function of local sedimentation rates

First Year: 2003 | End Year: 2004 | Status In work | Proj Duration For one full season (wet/dry)

Data Type/Location An array of 50 sediment traps are being monitored w/ water quality stations to monitor temp & light. Coral settling plates will be set out at 30' and 60' at 3 paired locations in the 2 marine units. Total of 96 plates will be monitored for coral recruits.

Comments: Metadata contact: Dwayne Minton, WAPA; Gordon Dicus, HAVO, is developing databases for this project

Data Collected Presently the following are being collected every three weeks in sediment traps, (started in June-July)
1) amount of sediment in (g)
2) Percent of organics, percent of terrestrial material
3) grain size determination
The recruitment sampling apparatus consists of a 4-limbed "tree" with each branch holding one pair of PVC recuitment plates (15cm x 15 cm) in both horizontal and vertical positions and plates will be collected every six weeks. Plates are microscopically examined for number of recruits, taxonomy & spatial location on the plate. During peak coral spawning times (summer) plates will be collected & analyzed more frequently.

Proj Purpose 1) Assess spatial and temporal patterns of coral recruitment at WAPA
2) Assess the relationship between sedimentation deposition and coral recruitment rate
3) Provide baseline data on the identity of coral recruits

Proj Usefulness In conjunction with ongoing sedimentation and water quality projects, information from this study will be used to develop best management practices for upland terrestrial watersheds at WAPA with respect to erosion mitigation. In addition, this information will be provided to the Territory of Guam and to the University of Guam for consideration in future academic or natural resource management projects.

Oranizations associated with this Project:

US National Park Service

Theme Keywords associated with Project

coral reef
nearshore
watersheds

Contact Persons associated with this Project:

Dwayne Minton	Ecologist, War in the Pacific National Historic Park	US National Park Service
Ian Lundgren		US National Park Service

Publications associated with this Project:

PARK : **WAPA**

Topic | Project Title Biological Monitoring of the The Water Monitoring Strategy for the Territory of Guam (WMSTG)

First Year: | End Year: | Status Planned | Proj Duration

Data Type/Location

Comments: PER RAYCHELLE: STILL NEED TO ENTER MORE INFORMATION!

Data Collected Past data collected on: species composition, substrate type, percent cover, and fish assemblage. The program is being expanded to include a "Toxic Materials Monitoring Program for Sediment and Tissue," and a "Freshwater Periphyton and Benthic Macroinvertebrates Assessment Program."

Proj Purpose Assess the periphyton and benthic macroinvertebrate assemblages in Guam's freshwater environments, assess levels of major chemicals of potential environmental concern (CPEC) in sediment and tissue of important recreational, commercial and subsistence target species

Proj Usefulness

Oranizations associated with this Project:

Guam Environmental Protection Agency

Theme Keywords associated with Project

Contact Persons associated with this Project:

Anna Maria Leon Guerrero	Biologist, Monitoring Program	Guam Environmental Protection Agency

Publications associated with this Project:

PARK : **WAPA**

Topic Landscape Project Title Botanical Inventory

First Year: End Year: Status In work Proj Duration

Data Type/Location

Comments:

Data Collected June, 2004

Proj Purpose To identify plant species within the park

Proj Usefulness

Oranizations associated with this Project: Theme Keywords associated with Project

National Parks Service Inventory and Monitoring

Contact Persons associated with this Project:

Joan Yoshioka	Univeristy of Hawaii Pacific Cooperative Studies Unit

Publications associated with this Project:

PARK : **WAPA**

Topic Marine Project Title Marine Preserve Monitoring

First Year: End Year: Status Proj Duration

Data Type/Location Visual transects and interval counts are used to assess fish species. Benthic monitoring to begin in 2004

Comments: Funded by NOAA - Coral Reef Monitoring Grand Sportfish Restoration

Data Collected Data are collected every 1-2 years. This is the second year in operation.

Proj Purpose To assess the effectiveness of Guam's marine preserves on food fish populations.

Proj Usefulness Provides assessment of fisheries impact/effect.

Oranizations associated with this Project: Theme Keywords associated with Project

Guam Division of Aquatic and Wildlife Resources

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **WAPA**

Topic Project Title Monitoring coral health spectrally in the Pacific Islands US National Parks

First Year: End Year: Status Proj Duration

Data Type/Location

Comments:

Data Collected

Proj Purpose "...To develop spectral monitoring methods to determine the health of corals located in US Pacific Islands National Parks. The spectral properties of corals under stress conditions associated with bleaching and disease will be identified and characterized for development of a coral health spectral database."

Proj Usefulness

Oranizations associated with this Project: Theme Keywords associated with Project

University of Hawai'i, School of Ocean and Earth Sciences and Technology, Department of Oceanography

University of Hawaii at Manoa, Hawaii Institute of Marine Biology

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **WAPA**

Topic | Project Title: Stream gauge map/location on Guam

First Year: | End Year: | Status | Proj Duration

Data Type/Location

Comments: For the data associated with what is observed online, contact either Rick Fontain or Jill Nishimora. These names were provided by Gordon Tribble, USGS

Data Collected

Proj Purpose

Proj Usefulness

Oranizations associated with this Project: | Theme Keywords associated with Project

US Geological Survey

Contact Persons associated with this Project:

Jill Nishimora		US Geological Survey
Rick Fontaine	Surface water specialist	US Geological Survey

Publications associated with this Project:

PARK : **WAPA**

Topic: Water Quality | Project Title: Surface Water Monitoring Network (SWMN)

First Year: | End Year: | Status | Proj Duration

Data Type/Location: 3 major water categories (river, marine, reef complexes) sampled on Rotating Basin Design (outlined by EPA's Env Monitoring and Assessment Program). Total of 65 River Stations, 17 Reef Stations and 38 Marine Stations. 4 subcomplexes sampled for two 6-week periods every other year (w/ first period during dry season (Jan-Jun); second during wet season (Jul to Dec). Over 2-yr period, all subcomplexes monitored. Monitoring prog includes biological portion (see biological monitoring section).
River sites: three in the Piti/Asan Watershed, three in the Namo River, Togcha River, Salines River, Finile Creek.
Reef sites: Agat Bay (mouth of Namo and north of Agat STP outfall)
Marine Site: Agat Bay (Agat STP outfall)

Comments: Anna sent Kimber DeVerse, forward to Raychelle Daniel, a copy ofan excel spreadsheet with locations with lat/long & exact location description

Data Collected: "conventionals": pH, Total Suspended Solids, Total Dissolved Solids, Temperature, Turbidity, Nitrite-nitrogen, Dissolved oxygen, Salinity, Nitrate-nitrogen, Total phosphorous, Ortho-phosphorous.

Proj Purpose: With the beach monitoring, the two comprise The Water Monitoring Strategy for the Territory of Guam (WMSTG). Which the goals are to: Conduct a comprehensive assessment of water quality throughout the island using a rotating basin approach; Complete a thorough evaluation of monitoring data;
Evaluate if the quality of the Island's waters is suitable for their designated uses; Evaluate if the Guam WQS are appropriate and relevant to present conditions in the waters of the Island; and
Coordinate new approaches to improving and protecting the islands water resources

Proj Usefulness

Oranizations associated with this Project: | Theme Keywords associated with Project

Guam Environmental Protection Agency

Contact Persons associated with this Project:

Anna Maria Leon Guerrero	Biologist, Monitoring Program	Guam Environmental Protection Agency

Publications associated with this Project:

PARK : **WAPA**

Topic | Project Title: terrestrial monitoring plots in forest and savanna

First Year: | End Year: | Status | Proj Duration

Data Type/Location

Comments: Other partners might include: PCSU, GEPA, Bureau of Coastal Zone Mangaement

Data Collected

Proj Purpose

Proj Usefulness

Oranizations associated with this Project: | Theme Keywords associated with Project

Guam Division of Forestry

Contact Persons associated with this Project:

Publications associated with this Project:

PARK : **WAPA**

Topic | Project Title: Weekly monitoring of groundwater wells, tap water, drinking water & marine water

First Year: | End Year: | Status | Proj Duration

Data Type/Location

Comments:

Data Collected

Proj Purpose

Proj Usefulness

Oranizations associated with this Project: | Theme Keywords associated with Project

Commonwealth of Northern Marianas Islands - Department of Environmental Quality

Contact Persons associated with this Project:

Publications associated with this Project: